



1. Emanuel Chabrier's *Souvenirs* is a quadrille on themes from this opera. Joseph Keilberth, Felix Mottl, and Ludwig Schorr von Carolsfeld all died while singing the lead tenor role in this opera. In one aria, this opera's female lead recalls saving someone who was mortally wounded in a barge. As it opens, a sailor sings of a "wild Irish maid," which the female lead takes as a personal insult. "Golliwog's Cakewalk" mockingly distorts a motive from this opera which features a half-diminished chord named for the first title character. The Prelude and Liebestod are often excerpted from, for 10 points, what opera about a pair of lovers from Irish mythology, composed by Richard Wagner?

ANSWER: *Tristan and Isolde* [or *Tristan und Isolde*; or *Tristan and Isolt*]

020-12-59-19102

2. The decay of polarized versions of these particles are used to explain the left-right asymmetry of the weak interaction in the TWIST experiment. They're not electrons, but their anomalous g-factor cannot be explained by QED, a fact used as evidence for non-Standard Model effects. These particles decay into a positron, an electron neutrino, and namesake antineutrino with lifetime of about 2.2 microseconds, and were initially confused for pions after their prediction by Yukawa. Replacing the electron in hydrogen with one of these can catalyze room-temperature fusion because they are 207 times more massive than the electron. On earth, they mostly come from cosmic rays. For 10 points, name this negatively-charged spin-one-half elementary particle.

ANSWER: muon

048-12-59-19103

3. This figure had a cult centered at the site of his death at which girls about to marry would offer locks of their hair. This man was reborn and lived the rest of his life in the grove of the nymph Aricia under the name Virbius. This man was killed when a bull summoned by a curse emerged from the sea and frightened his horses. That curse was one of three guaranteed by the god Poseidon to this man's father. This follower of Artemis rejected the advances of a woman who then hanged herself, his stepmother Phaedra. For 10 points, name this son of Theseus.

ANSWER: Hippolytus

105-12-59-19104

4. One scholar of this thinker identified an "epistemological break" between his early and mature works. His theories were applied to literary criticism by Gyorgy Lukacs. This thinker argued that markets cause people to fetishize the value of commodities, and divided society into a material base and a political superstructure. He wrote that workers provide "surplus value" for their employers in a book outlining his theory of historical materialism. He often used the slogan "from each according to his ability, to each according to his need." For 10 points, name this German social critic, the author of *Das Kapital*.

ANSWER: Karl Marx

004-12-59-19105

5. These diagrams often display VNTRs and microsatellites next to each entry, and MERLIN is a software package used to form QTL analysis given one of these diagrams. The recombination frequency theta can be calculated using these diagrams. These diagrams are used to calculate LOD scores in linkage analysis. Triangles are used to indicate miscarriages in these diagrams. A double line is used to indicate consanguineous unions in these diagrams, which use diamonds to show sexually ambiguous persons. Roman numerals are used to separate out each generation in these diagrams, in which women are displayed as circles and men as squares. In these diagrams, affected people are usually a darker color. For 10 points, name these diagrams used to display family relationships and genetic disease.

ANSWER: **pedigree** [don't take anything else, the term is really specific]

048-12-59-19106

6. This author wrote a poem identifying the title virtue with poverty and describing its role in the story of Jonah. This author also wrote a poem in which the narrator learns about the New Jerusalem from a maiden he identifies with the title lost object. This author of *Cleanness* and *Patience* also wrote a poem in which one title character breaks the rules of a game by keeping a girdle which supposedly grants invulnerability, for which he receives a nick on the neck rather than beheading by the other title character in a confrontation planned by Morgan le Fay. For 10 points, name this anonymous author of *Sir Gawain and the Green Knight*.

ANSWER: The **Pearl** Poet [or the **Gawain** Poet before it is read]

030-12-59-19107

7. This man's followers included Oswald Myconius, who invited him to a job despite this man's admitted affair with a "common strumpet." Leo Jud helped this man spark an outcry by publicly eating sausages. This opponent of an allegiance called the Five States was succeeded at the Grossmünster by Henrich Bullinger after being killed in battle during the Kappel Wars. He propounded his religious beliefs in the 67 Articles, and argued for a wholly symbolic Eucharist at the Marburg colloquy, where he split decisively with Martin Luther. For 10 points, name this man who denounced Anabaptists in the cantons and was a Protestant reformer in Zurich.

ANSWER: Huldrych **Zwingli** [or Ulrich **Zwingli**]

104-12-59-19108

8. The protagonist of this novel lives in South End, which leads him to hire Mr. Seymour to build a house in New Land. One typist in this novel is the daughter of Jim Millon and is named Zerilla. It is revealed that this novel's title character was taught Old Testament verses by his parents in a series called the "Solid Men of Boston." In this novel, Persis disapproved of her husband's treatment of Rogers, who was his former partner in the paint business. In this novel, a love affair ends when Tom Corey reveals that he loves Penelope more than Irene. For 10 points, name this William Dean Howells novel about the ascent of the title businessman.

ANSWER: *The **Rise of Silas Lapham***

149-12-59-19109

9. The target of this event wrote the posthumously published memoir *Answer to History*. Before this event, the Cinema Rex fire, which killed over 400, was blamed on the government. A pivotal moment in this event involved the shooting of protesters at Zhaleh Square. The target of this event underwent gallstone surgery at the Cornell Medical Center, prompting protests. The reform efforts of Shapour Bakhtiar, which included dissolving the secret police known as SAVAK, did not placate religious conservatives. A few months after it took place, 66 Americans were held hostage after an embassy was stormed. For 10 points, name this 1979 event that overthrew Shah Mohammad Reza Pahlavi and replaced him with the Ayatollah Khomeini.

ANSWER: **Iranian Revolution** [accept **1979 Revolution** until "1979" is mentioned, accept **overthrow of the Shah** until "Shah" is mentioned; prompt on **Islamic Revolution**]

052-12-59-19110

10. Gislebertus created a relief sculpture of this scene in the tympanum over the main entrance to Autun Cathedral. This scene is depicted in several frescoes of the Orvieto Cathedral painted by Luca Signorelli. In Giotto's version of this scene, Enrico Scrovegni presents Mary with the Arena Chapel. Another version of this scene shows a ferryman about to whack his passengers with an oar and depicts Biagio de Cesena with donkey ears. Daniele da Volterra covered the genitals exposed in that scene, which depicts its artist as St. Bartholomew holding flayed skin and is located behind the altar of the Sistine Chapel. For 10 points, name this scene painted by Michelangelo, in which Christ casts sinners into hell.

ANSWER: *The **Last Judgment***

080-12-59-19111

11. The strength of one component of this phenomenon is measured as the difference in surface pressure between Tahiti and Darwin. Although not global warming, this phenomenon increases vertical wind shear, which adversely impacts the strength of hurricanes. That component is the Walker circulation. One of the strongest occurrences of this phenomenon, in 1983, marked the start of mass coral bleaching. This phenomenon causes a warm current to appear off the coast of Peru, preventing upwelling due to the cold Humboldt current. For 10 points, name this irregular cycle of warming and cooling in the eastern Pacific.

ANSWER: **El Niño**-La Niña/Southern Oscillation [or **ENSO**]

066-12-59-19112

12. The Freeman Etudes for this instrument were composed by John Cage. Francesco Geminiani's treatise on this instrument used fingering notation re-introduced by Carl Flesch in his manuals. August Wilhelmj's arrangement of Bach's third orchestral suite for this instrument is played entirely on one string. The "F.A.E. Sonata" was written for a player of this instrument, Joseph Joachim, who also revived Bach's "Sonatas and Partitas." Rodolphe Kreutzer was the dedicatee of a Beethoven sonata for this instrument. Another set of solo works for this instrument is the *24 Caprices*. For 10 points, name this instrument played by Niccolò Paganini, which is higher than the viola.

ANSWER: **violin**

121-12-59-19113

13. On the advice of a one-eyed stranger, this hero chose his horse by driving a herd into a stream and seeing which one had the least difficulty crossing. He dug a series of trenches along the path a monster took to drink at the river in order to lie in wait to stab it. After obtaining the fragments of his father's old sword, he reforged them into a weapon sharp enough to cut an anvil in half. This rider of Grani killed his old tutor, Regin, after attaining the ability to understand birdsong. The wielder of Gram, this man was killed by Hogni for abandoning Brynhildr, whom he rescued from a circle of fire. For 10 points, name this hero who slew Fafner, the son of Sigmund in the Volsung Saga.

ANSWER: **Sigurd** [or **Siegfried**]

080-12-59-19114

14. This color gives the colloquial name for the *Nomenclature of Organic Chemistry* book published by IUPAC. An indicator of this color is used to treat methemoglobinemia; that is its "methylene" form. In a common laboratory demonstration, a colorless, alkaline glucose solution in a closed bottle turns this color when the bottle is shaken. The indicator Congo red unusually turns this color in acidic solution. The anion in prussic acid was named for being isolated from the "Prussian" pigment of this color. It represents nitrogen in CPK models of compounds. This is the color of anhydrous cobalt ions and of copper-ammonia solutions. For 10 points, name this color of many cyanide-containing compounds, also the color that litmus turns in basic solution.

ANSWER: **blue**

003-12-59-19115

15. In this novel, one character bribes the servant Christophe to keep quiet about his late-night meetings. After mentioning this novel's title character, one man is banned from the Countess de Restaud's salon. One character in this work is arrested by Michonneau after killing Taillefer. That murder was committed so that another character can marry Victorine and is committed by Vautrin. This book's title character dies blessing his daughters Anastasie and Delphine. The funeral arrangements for that man are made by Eugene de Rastignac. For 10 points, name this novel by Honore de Balzac about a doting father.

ANSWER: *Le Pere Goriot* [or *Old Goriot*; or *Father Goriot*]

149-12-59-19116

16. This island's foxes are infected with echinococcus parasite, which has since infected virtually all its streams and made water unsafe to drink. This island's four administrative divisions are called Circuits, and its largest city is home to temporary sculptures at a yearly "snow festival." This island is home to a caldera lake in its Akan National Park, and it lies south of the La Perouse strait. The south of this island is reached by the extremely long Seikan tunnel, which runs under the Tsugaru Strait. For 10 points, name this island whose largest city is Sapporo, the northernmost large island of Japan.

ANSWER: **Hokkaido**

104-12-59-19117

17. The text *Mirabilia Urbis Romae* was written for the benefit of these people. These people wore a robe called the *sclavein*, kept everything they owned in a single small bag called a "scrip," and carried large, blessed staffs to fight off wolves. Some of these people sewed cockle-shells into their hats, while others received palm leaves and were therefore called "palmer." Monks organized hostels to house these people, whose main destinations included Santiago de Compostela. For 10 points, name these people who traveled to holy sites in the Middle Ages.

ANSWER: **pilgrims**

080-12-59-19118

18. In this work, Lady Blarney and Miss Carolina Wilhelmina Amelia Skeggs do the bidding of the villain, and Timothy Baxter is another of his henchmen. Mr. Symmonds is an innkeeper in this work, in which the title character insults the thrice-married Mr. Wilmot with a lecture on monogamy. One of the title character's children is tricked by Ephraim Jenkinson into selling a horse for a gross of green spectacles. In this novel, Mr. Burchell is revealed to be the uncle of Squire Thornhill, who abducts the title character's daughter Olivia to enter into a false marriage. For 10 points, name this novel about the Primrose family, written by Oliver Goldsmith.

ANSWER: *The Vicar of Wakefield*

030-12-59-19119

19. One section of this work discusses a fictional speech by Epicurus and asks whether we can infer that an unfinished building will be finished. Another section states that ideas are created through compounding, augmenting, diminishing, or transposing. Another section discusses the reliability of testimony, and argues that events that contradict the law of nature should be discounted. Besides that section, "Of Miracles", its section "Of the origin of ideas" discusses the missing shade of blue. For 10 points, name this work about epistemology by David Hume.

ANSWER: An *Enquiry Concerning Human Understanding*

048-12-59-19120

20. A pioneer in this profession and namesake of a society of people who worked in this field was Judson T. Welliver. One member of this profession was called an "intellectual blood bank" and was named Ted Sorensen. While working in this profession, William Safire coined the phrase "nattering nabobs of negativism." Peggy Noonan cited the "Boys of Pointe du Hoc" in commemoration of the fortieth anniversary of D-Day while working in this profession, in which she also coined the phrase "Read my lips, no new taxes." For 10 points, name this profession responsible for orations such as Kennedy's inaugural address and George H.W. Bush's acceptance of the 1988 Republican nomination.

ANSWER: speechwriters [or equivalent answers]

030-12-59-19121

21. One character in this novel compares the supermarket to the Tibetan afterlife because it contains "psychic data." In this novel, one of the protagonist's sons cries for seven days without explanation. One of this novel's characters, Orest Mercator, hopes to break the world record for longest time spent in a cage of poisonous snakes. The protagonist's wives are all connected to the intelligence community except Babette, who discusses sunsets at the end of this novel. In this novel, Willie Mink sells the drug Dylar, which alleviates the protagonist's fear of death. In this novel, the Airborne Toxic Event affects Hitler Studies Professor Jack Gladney. For 10 points, name this novel by Don DeLillo.

ANSWER: *White Noise*

079-12-59-19122

22. This man passed a Matrimonial Causes Act, which removed the process of divorce from the purview of the Church of England. He publicly supported the Ottoman Empire against the threat of Muhammad Ali. This proponent of "gunboat diplomacy" said that a British subject should feel confident that the "strong arm of England will protect him" in the "Civis Romanus Sum" speech, which he gave after an anti-Semitic mob attacked a native of Gibraltar in the Don Pacifico affair. During his tenure, the RMS *Trent* was seized while carrying two representatives of a country on which his country was dependent for cotton. For 10 points, name this British Prime Minister who served during the U.S. Civil War.

ANSWER: Lord Palmerston [or Henry John Temple, 3rd Viscount Palmerston]

079-12-59-19123

23. His first doctoral student, Melba Phillips, was fired from Brooklyn College for refusing to testify in front of a Senate committee about internal security; with her, he names a type of strip reaction. Using past research by Richard Tolman he and George Volkoff calculated the upper mass limit of a neutron star; with his advisor Max Born he approximated the wave function of a molecule. He referenced the Bhagavad Gita's quote of "now, I am become Death, the destroyer of worlds" after he oversaw the successful Trinity test. For 10 points, name this physicist, referred to as the "father of the atomic bomb" for his work in the Manhattan project.

ANSWER: Julius Robert Oppenheimer

088-12-59-19124



1. Irnerio is a character in this work who uses books not to read but as material for his statues. For 10 points each:

[10] Name this novel in which a second-person protagonist discovers his initial difficulties in finishing this book are due to Ermes Marana and his Organization for the Electronic Production of Homogenized Literary Works.

ANSWER: ***If on a winter's night a traveler*** [or ***Se Una Notte d'Inverno un Viaggiatore***]

[10] This man wrote *If on a winter's night a traveler*. His book *Cosmicomics* is a collection of short stories that are based upon a single scientific fact and are usually narrated by Qfwfq.

ANSWER: Italo **Calvino**

[10] *If on a winter's night a traveler* and *Cosmicomics* were translated into English by this man. This man has translated several other Calvino works, as well as the essay collections and first four novels of Umberto Eco.

ANSWER: William **Weaver**

121-12-59-19201

2. This surface technically has no boundary. For 10 points each:

[10] Name this three-dimensional pipe-like shape whose “outside” surface is also its “inside”. It can be cut along its plane symmetry to create two Mobius strips.

ANSWER: **Klein bottle**

[10] The Klein bottle and the Mobius strip both *lack* this property, by which notions such as “clockwise” and “counterclockwise” are consistently defined for paths on a surface.

ANSWER: **orientable** [or **orientability**]

[10] On some paths around non-orientable surfaces, this mathematical object reverses direction, meaning no outside surface can be consistently defined. This quantity is dotted with a function or field in the formula for surface integrals.

ANSWER: **normal** vector [prompt **cross-product of tangent vectors** or similar answers]

104-12-59-19202

3. In response to the debate over this issue, the AFL-CIO circulated posters that said "Stand with Wisconsin" underneath a blue fist clenched in the shape of Wisconsin. For 10 points each:

[10] Name this ability of unions to negotiate with their employers about wages, hours, and other issues. Proposed limitations on this practice led to a gubernatorial recall election in Wisconsin on June 5, 2012.

ANSWER: **collective bargaining**

[10] This Wisconsin Republican became the first incumbent governor to win a recall election by defeating Milwaukee mayor Tom Barrett.

ANSWER: Scott **Walker**

[10] The morning after the election, a viral video showed an unhappy supporter of Barrett doing this action to Barrett. A similar viral video from June 2012 shows a far-right Greek political activist throwing a glass of water at a left-wing politician and doing this action to her live on Greek television.

ANSWER: **slapping** in the face [or **hitting**; or **striking**; accept other obvious equivalents]

079-12-59-19203

4. In 1575, Queen Elizabeth gave this man and William Byrd a monopoly for the printing of music and music paper in England. For 10 points each:

[10] Name this English composer of the five part *Salve Intemerata* mass as well as the *Miserere Nostri*. He also composed the forty-part motet *Spem in Alium*.

ANSWER: Thomas **Tallis**

[10] This man composed *Fantasia on a Theme by Thomas Tallis*. A musical editor of *The English Hymnal*, this man also composed *Fantasia on Greensleeves*.

ANSWER: Ralph **Vaughan Williams**

[10] This Vaughan Williams piece was prefaced by its namesake George Meredith poem, which states, "He rises and begins to round/He drops the silver chain of sound."

ANSWER: *The **Lark Ascending***

030-12-59-19204

5. With Apsu, this creature gave birth to the deities Lahmu and Lahamu. For 10 points each:

[10] Name this primordial goddess of the ocean, a chaotic being personified as a dragon who was killed by Marduk.

ANSWER: **Tiamat**

[10] Marduk kills Tiamat in this Mesopotamian epic, named for its opening words, which mean "when on high."

ANSWER: the ***Enuma Elish***

[10] This god of freshwater was the first consort of Tiamat. After he planned to destroy his descendants, Ea killed him.

ANSWER: **Apsu**

064-12-59-19205

6. Following the First Battle of El Alamein, this man relieved Claude Auchinleck of his command of the British Eighth Army. For 10 points each:

[10] Name this British World War II general who forced Erwin Rommel into retreat following the Second Battle of El Alamein.

ANSWER: Bernard Law **Montgomery**

[10] Bernard Montgomery was the lead commander of this airborne operation that sought to capture bridges over the Meuse and Rhine. The last radio transmission from Lt. Col. John Frost's regiment at the Arnhem bridge during this operation was "Out of ammo, God save the King."

ANSWER: Operation **Market Garden**

[10] This man supposedly introduced General Montgomery to General Russell Maxwell, commander of the US Army in Egypt at the time. This man's book *One World* was written about his trip on *The Gulliver*.

ANSWER: Wendell Lewis **Wilkie**

149-12-59-19206

7. For 10 points each, name these terms from acoustics.

[10] This term denotes a frequency ratio of 2:1, and rolloff of filters is usually described as "dB per" this interval. The term is taken from music, where it has a similar meaning.

ANSWER: **octave**

[10] Intensity in acoustics is usually measured in dB above this standard reference level, equal to 20 micropascals. It is usually considered the lowest threshold of human hearing.

ANSWER: **sound pressure level** [or dB **SPL**]

[10] This quantity is given by the Sabine equation, which states that it is proportional to volume divided by the product of surface area and the average absorption coefficient. It describes how long it takes for a sound to decay to inaudibility.

ANSWER: **reverberation time** [or **RT**<sub>60</sub>; prompt on **reverberation**]

003-12-59-19207

8. Verginius Rufus declined acclamations to the Roman emperors twice after defeating and killing this man. For 10 points each:

[10] Name this Aquitanian who revolted in Gaul after securing the allegiance of the Hispanian governor Galba.

ANSWER: Gaius Julius **Vindex**

[10] Vindex's revolt was one reason for this emperor's 69 CE suicide, after which Galba succeeded him. This man with a flair for stage performance killed his wife Poppea and rebuilt Rome after the Great Fire.

ANSWER: **Nero** Claudius Caesar Augustus Germanicus

[10] This historian, a secretary to Hadrian, accused Nero of starting the Great Fire of Rome in his set of twelve short biographies from Julius Caesar to Domitian, *Lives of the Caesars*.

ANSWER: Gaius **Suetonius** Tranquillus

104-12-59-19208

9. The narrator of this poem sits in Fugazzi's, listening to the "crack of doom on the hydrogen jukebox." For 10 points each:

[10] Name this Allen Ginsberg poem that opens with the line, "I saw the best minds of my generation destroyed by madness."

ANSWER: "**Howl**"

[10] *Howl* was subject to an obscenity trial in which this co-founder of the City Lights bookstore was implicated.

ANSWER: Lawrence **Ferlinghetti**

[10] The third part of "Howl" makes continuous use of this refrain, which is followed by lines such as "where you imitate the shade of my mother" and "where you're madder than I am."

ANSWER: "**I'm with you in Rockland**"

127-12-59-19209

10. Dean Acheson agreed that this treaty would not be violated by practice exercises, assuming both governments were aware of such activity ahead of time. For 10 points each:

[10] Name this treaty that limited naval presence on Lake Champlain and the Great Lakes.

ANSWER: **Rush-Bagot** Treaty

[10] The Rush-Bagot Treaty was signed after the conclusion of this war.

ANSWER: War of **1812**

[10] In another naval incident along the American-Canadian border, this ship was attacked by the British in 1837 after it was used to arm the rebels in the "Patriot Army" of Rensselaer Van Rensselaer.

ANSWER: SS **Caroline**

088-12-59-19210

11. This novel centers on a matchmaker who is not very good at making matches. For 10 points each:  
[10] Name this Jane Austen novel about a member of the Woodhouse family, a “handsome, clever, and rich” woman who meddles in the affairs of her social circle.

ANSWER: **Emma**

[10] Emma’s main love interest and supposed rival of Frank Churchill is this elder brother of her brother-in-law.

ANSWER: Mr. **Knightley** [or **John Knightley**]

[10] One of the friends meddled with is this unsophisticated but educated woman, whom Emma convinces to reject Robert Martin’s first proposal until John Knightley convinces Emma otherwise.

ANSWER: **Harriet** Smith [or Harriet **Smith**]

147-12-59-19211

12. This city’s medina quarter contains a bustling central square called the Jemaa el-Fnaa. For 10 points each:

[10] Name this city which lies south of the Tensift River, the dominant city of central Morocco and the first of Morocco’s four Imperial cities.

ANSWER: **Marrakech**

[10] This largest Moroccan city was the site of a 1943 conference between Churchill, Roosevelt, and De Gaulle.

ANSWER: **Casablanca**

[10] This Moroccan city, which lies just across the Strait of Gibraltar from Spain, was a favorite of spies in the early 20th century because of its status as an international zone.

ANSWER: **Tangiers**

015-12-59-19212

13. Practitioners of this art form used a pen called the *qalam* and could create signatures called *tughra*. For 10 points each:

[10] Name this form of Islamic art, which was used to create beautifully-written manuscripts of the Quran. It decorates buildings like the Taj Mahal.

ANSWER: Arabic **calligraphy**

[10] Islamic calligraphy also decorates this structure, which was constructed by the caliph Abd al-Malik. The Well of Souls lies under this structure, and it marks the location of Muhammad's ascent into heaven during the Night Journey.

ANSWER: the **Dome of the Rock**

[10] This is the earliest-known calligraphic script used to transcribe the Quran. Named for an Iraqi city, this script was replaced by the cursive *naskhi* script.

ANSWER: **Kufic** script

080-12-59-19213

14. The Mundell-Fleming model predicts that this condition is impossible if a country also pursues an independent monetary policy and allows the free movement of capital. For 10 points each:  
[10] Name this condition, in which a country's currency is pegged to another currency or commodity such as gold. It is the opposite of allowing a currency's value to float.

ANSWER: **fixed** exchange rate [or word forms]

[10] Mundell-Fleming extends this economic model by considering balance of payments in an open economy. This economic model predicts the interest rate and GDP of an economy based on when goods and money markets are in equilibrium.

ANSWER: **IS/LM** model [or **Investment Saving/Liquidity preference Money** model]

[10] The LM curve comes from when demand for this quantity is equal to its supply. Demand for it decreases as interest rates go up, and is known as the "liquidity preference."

ANSWER: demand for **money**

121-12-59-19214

15. Name these Old Testament prophets, for 10 points each:

[10] This man interpreted the "writing on the wall" and was cast into a lion's den.

ANSWER: **Daniel**

[10] This man was known as "the weeping prophet" for predicting Babylonian invasion.

ANSWER: **Jeremiah**

[10] Along with Micah, this man prophesied during the reign of Hezekiah. The Jehovah's Witnesses took their name from his book, in which he replies to God's request by saying "Here am I; send me."

ANSWER: **Isaiah**

015-12-59-19215

16. The victors at this battle were a combined British, French, and Russian fleet led by Edward Codrington. For 10 points each:

[10] Name this 1827 naval battle, a decisive loss for the Ottomans and last major battle fought entirely among sailing ships.

ANSWER: Battle of **Navarino**

[10] The Battle of Navarino was fought over the independence of this country. Its revolutionaries included Alexander Ypsilantis and Theodoros Kolokotronis.

ANSWER: **Greece** [or **Hellenic Republic**; or **Ellas**; or **Ellada**; or **Elliniki Dhimokratia**]

[10] Five years after Navarino, this Bavarian prince was named the first king of Greece.

ANSWER: **Otto** von Wittelsbach [or **Othon**]

015-12-59-19216

17. This man delivered a lecture on Holderlin's *Der Ister*. For 10 points each:

[10] Name this philosopher, who used the word "gestell" to describe the concept that lies beneath modern technology in his *The Question Concerning Technology*. He analyzed Van Gogh's *A Pair of Shoes* in *The Origin of the Work of Art*.

ANSWER: Martin **Heidegger**

[10] In this work, Heidegger attempts to determine the meaning of Dasein. It claims that the two modes of *existenz* are authentic existence and inauthentic existence and that Care is the Being of Dasein.

ANSWER: **Being and Time** or [**Sein und Zeit**]

[10] Heidegger claims that our everyday existence allows for the fundamental structure of the Dasein to be have this characteristic. This characteristic is the primary mode of the Dasein and it denotes the Dasein's meaningful being alongside other entities.

ANSWER: **Being-in-the-world** [or **In-der-Welt-sein**]

149-12-59-19217

18. One story about this general tells of his requesting supplies, only to deny his own requests as quartermaster and then bring the matter to a superior's attention. For 10 points each:

[10] Name this Confederate general who lead his forces to victory at the Battle of Chickamauga.

ANSWER: Braxton **Bragg**

[10] Bragg's troops found less success in the Chattanooga Campaign against the Union troops of this general, who also seized Vicksburg.

ANSWER: Ulysses S. **Grant** (or Hiram Ulysses **Grant**)

[10] This general was once sent to inspect Bragg's troops with the intended result of replacing him, but found the troops in good condition. Later on, he was unable to replace Bragg because of an injury he suffered at the Battle of Seven Pines.

ANSWER: Joseph Eggleston **Johnston**

088-12-59-19218

19. This novel has one-word chapter titles such as "Metropolis," "Rollercoaster," and "Skyscraper." For 10 points each:

[10] Name this novel centering on the aspiring actress Ellen Thatcher, the immigrant Jimmy Herf, and dozens of other characters who try to make their fortunes in the title borough.

ANSWER: ***Manhattan Transfer***

[10] *Manhattan Transfer* is a novel by this World War I ambulance driver who wrote the anti-war novel *Three Soldiers* as well as the *U.S.A.* trilogy.

ANSWER: John **Dos Passos**

[10] Dos Passos also wrote the novel *Adventures of a Young Man*, in which Glenn Spotswood becomes disillusioned with the Communist Party, is imprisoned as a Trotskyite, and dies on a party mission.

*Adventures of a Young Man* is the first novel in this other trilogy by Dos Passos.

ANSWER: ***District of Columbia***

030-12-59-19219

20. Using mismatched primers in this technique is an easy method of site-directed mutagenesis. For 10 points each:

[10] Name this technique that is used to amplify a few copies of DNA. It was developed by Kary Mullis.

ANSWER: **polymerase chain reaction** [or **PCR**]

[10] This polymerase is frequently used in PCR. Brock's isolation of this thermostable DNA polymerase eliminated the need to add a new enzyme during the thermocycling process.

ANSWER: **Taq** polymerase

[10] This last step of the PCR cycle usually occurs around 72 degrees celsius. It is the stage at which the new DNA strand is synthesized, and it is extended in the final cycle.

ANSWER: **elongation** [or **extension**]

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21. This substance can be treated with sulfonate-containing ion-exchange resins to reduce its effect. For 10 points each:

[10] Name this substance which contains high levels of calcium and magnesium cations. Soaps are often less effective in it because they precipitate out with the cations.

ANSWER: **hard water** [prompt on partial answers like **water**]

[10] One source of calcium ions is the dissolution of this ionic compound that forms limestone and chalk.

ANSWER: calcium **carbonate**

[10] Ion-exchange materials are often made from this microporous aluminosilicate mineral, which is also used in water purifiers and detergents. They are known as molecular sieves.

ANSWER: **zeolites**

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