

1. Anton Seidl orchestrated a "Notturmo" by this composer as part of a suite which this man himself later revised. One of his works opens with a one-bar pianissimo timpani roll that crescendos and arrives at a tutti chord with the full orchestra, followed by a brief cadenza by the soloist. That piece shares its key with a work of the same type by Schumann. He composed ten volumes of solo piano pieces, including "To Spring" and "Wedding Day at (\*) Trolldhaugen", and his only concerto is his *Piano Concerto in A Minor*. He also wrote the piece "Morning Mood" to accompany a play by one of his countrymen. For 10 points, name this composer of the *Lyrical Pieces*, whose incidental music to *Peer Gynt* also includes "In the Hall of the Mountain King."

ANSWER: Edvard Hagerup Grieg

<Rosenberg>

2. This leader was criticized at the end of 2013 when Selic raised interest rates. This leader is opposed by the Free Pass Movement, which helped organize protests in 2013 when she raised bus fares. During 2013, she cancelled a trip to talk with Obama in the White House after it was discovered that, as with Angela Merkel, the U.S. was listening to her (\*) phone conversations. This member of the Workers' Party is running against Aécio Neves in a re-election bid. She rose to power by defeating Jose Serra when her predecessor was term-limited. For 10 points, name this former Chief of Staff to President Luiz Inácio Lula da Silva who is preparing to host the World Cup as the current President of Brazil.

ANSWER: Dilma Rousseff

<Reinstein>

3. Spectroscopy based on this process can only measure transitions for which delta J equals plus or minus one. Lorentz transformations among spacetime coordinates correspond to processes of this type. The matrix describing this process has diagonal cosine terms and antisymmetric off-diagonal sine terms. A black hole undergoing this process has a ring-shaped singularity, is surrounded by an oblate ergosphere, and is described by the Kerr metric. Symmetry under this process leads to conservation of (\*) angular momentum by Noether's theorem. Its rate is commonly given in radians per second, the units of angular velocity. For 10 points, name this process of movement by some angle around a central point.

ANSWER: rotation

<Eltinge>

4. A novel written in this language is divided into "jubilees" and "cycles" and concerns the growth of Albano de Cesara. Folk songs written in this language were compiled in the collection *The Boy's Magic Horn*. An author using this language described a woman putting an ad in the newspaper to discover the father of her child, who turns out to be Count F, in *The (\*) Marquise of O*. Another author writing in this language described the "journeyman years" and "apprenticeship" of a businessman and also wrote a novel featuring the two-pistols suicide of a man spurned by Lotte. The "storm and stress" movement began in this language. For 10 points, name this language used by Jean Paul, Heinrich von Kleist, and Johann Wolfgang von Goethe.

ANSWER: German [or Deutsch]

<Gupta>

5. H.H. Wilson created the first English version of a poem in this language in which an exiled nature spirit convinces the title character to carry a message to his wife in a city ruled by a god of wealth. The protagonist of a play written in this language finds a signet ring in the belly of a fish, allowing him to break a curse and recognize his wife. A seven-book poem in this language is titled for a character whose (\*) sandals are placed on his throne during his exile. In that epic in this language, the protagonist overthrows the reigning monkey king and builds an army to rescue his abducted wife Sita from the demon Ravana. For 10 points, name this primary liturgical language of Hinduism, used to write the works of Kalidasa and the *Ramayana*.

ANSWER: classical Sanskrit [or Samskrtam]

<Carson>

6. A warlord of this ethnicity was assassinated in a castle on Lake Pamvotis after his disregard for the Ottoman Empire got him the epithet "Lion of Yannina." Prince William of Wied ruled a nation of these people that grew out of the League of Prizren and asserted independence in the Vlore Proclamation. A fighter for these people named George Kastrioti took a title meaning "Lord Alexander" in Turkish; that national hero was (\*) Skanderbeg. People of this ethnicity formed the KLA during a 1998-1999 war that provoked a NATO response, and declared independence in 2008 from Serbia. For 10 points, name this ethnicity of King Zog, a mostly-Muslim people that dominates Kosovo and a long-isolated Balkan nation once led by Communist dictator Enver Hoxha.

ANSWER: Albanians [prompt on "Kosovars"]

<Bollinger>

7. This man's list of properties which are "in" a primary substance versus properties which are "said of" a primary substance is commented on in the *Isagoge*. This deviser of ten fundamental *Categories* wrote that some people are naturally disposed to be slaves in a work laying out three good and three perverse types of government. His notion of *telos*, or end purpose of an object, is among his (\*) "four causes." The first man to describe the supreme being as an "unmoved mover," he wrote that each virtue consists of a mean between vices at extremes. For 10 points, name this Greek philosopher whose lectures were written down in *Politics*, *Nicomachean Ethics*, and *Metaphysics*, a student of Plato.

ANSWER: Aristotle of Stagira [or Aristoteles]

<Jackson>

8. This people's capital has a name roughly meaning "The tree lives!," and was founded after a priest planted two trees on the spot where one survived after the other died. Queen Yaa led the final uprising of these people, who defeated the Denkyera and received rent from the Dutch for the use of Elmina castle, a key slave trading fort. Osei Tutu founded this kingdom, a subgroup of the Akan ethnicity which developed (\*) *kente* cloth. British officer Garnet Wolsley besieged their capital at Kumasi, forcing them people to defend a sacred object which descended from heaven and was never allowed to touch ground. For 10 points, name this African kingdom home to the sacred Golden Stool, which was in modern-day Ghana.

ANSWER: Ashanti kingdom [or Asante]

<Jackson>

9. GLUT2 is coupled to this protein in the intestinal lumen. Phosphorylation of an aspartate in this protein's E1 configuration greatly increases its binding affinity. Ouabain and digitalis competitively inhibit this protein; accordingly, it is targeted by cardiac glycosides to treat congestive heart failure. Jens Skou won the 1997 Nobel for characterizing this P-class enzyme. A ratio of (\*)  $2/3$  is added to the Nernst equation to determine the potential created by this protein, which is about negative 60 millivolts in the resting state. This antiporter hydrolyzes ATP, causing a conformational shift that releases three ions into the cytosol. For 10 points, name this protein that transports alkali metal cations into and out of the cell through active transport.

ANSWER: sodium/potassium pump [or sodium/potassium ATPase; or sodium/potassium transporter; or K<sup>+</sup> and Na<sup>+</sup> instead of sodium and potassium]

<Silverman>

10. A man who plants a sapling while hearing about this event is advised to go on planting that sapling. It is followed by the Olam Ha-Ba. This event is the subject of the *Ani Ma'amin*, a setting of the twelfth of the thirteen principles in the *Yigdal*. A widespread belief that this had occurred was shattered when the leader of the Sabbateans converted to Islam. (\*) Elijah announces this event, which will entail the rebuilding of the temple and the gathering of the exiles to Israel by a descendant of David. For 10 points, identify this apocalyptic occurrence in Jewish belief, which involves God's anointed coming to rule over the Hebrews.

ANSWER: the coming of the Messiah [prompt on descriptive answers such as the Jewish End of Days; accept equivalents involving Mashiakh or the anointed one before it is read]

<Bollinger>

11. Gas chromatography of this substance results in an "unresolved complex mixture" hump at high retention times. Its density is measured in terms of API gravity rather than specific gravity. Asphaltenes are found in this substance. Though it lacks oxygen, a group of nonspecific nonpolar solvents are named for this substance's "ether". This substance is called (\*) "sweet" when it has a low concentration of sulfur. Zeolites catalytically break down this substance into small paraffins during cracking. Fractional distillation of this material is used to separate kerosene from smaller alkanes and alkenes. For 10 points, name this substance formed from fossilized organic matter, a fossil fuel refined into gasoline.

ANSWER: petroleum [or crude oil; prompt on oil]

<Silverman>

12. A character who attends one of these events suggests saying that the participants beat their mothers. A participant in these events explains to a woman who reads his palm that he kills his best friends lest they kill him. The un-retired Belmonte disappoints the crowd at one of these events, some of whose participants are calmed by a group of steers. An innkeeper stresses the importance of (\*) *afición* for these events, and Montoya feels betrayed after seeing a nineteen-year-old prodigy drinking with Mike Campbell's fiancée. After one of them, Pedro Romero presents a severed ear to Brett Ashley, who is accompanied to that one by Jake Barnes. For 10 points, name these Spanish sporting events that figure prominently in *The Sun Also Rises*.

ANSWER: bullfights [or tauromaquia]

<Mehigan>

13. The zenzi-zenzi-zenzic notation was used to represent this power of a number. John Graves developed a normed division algebra over the real numbers in which each element has this many components and in which operations are neither commutative nor associative, but are alternative. The polyhedron with this many faces is the dual of the cube. In the fifth term of the Taylor series expansion of cosine, this is the power to which the variable is raised. A regular polygon with this many sides will have an internal angle of (\*) 135 degrees. A number with this base is usually converted from binary grouping in threes. This number is the Fibonacci number between 5 and 13. For 10 points, name this number, the third power of two.

ANSWER: eight [or 8]

<Jose>

14. These creatures overcame a warrior with impenetrable skin by burying him underneath uprooted trees. In another story, two of these creatures named Hylaeus and Rhaecus attempted to rape Atalanta. One of these creatures named Eurytion assaulted Hippodamia during her wedding, which led to a conflict in which they smothered the warrior Caeneus. These creatures were born when a king attempted to rape (\*) Hera, but instead copulated with the cloud Nephele. One of these figures gave Deianira a poisoned tunic for her husband; a more benevolent one taught Achilles and Jason the lyre. For 10 points, name this mythological race exemplified by Nessus and Chiron, which are half-human and half-horse.

ANSWER: centaurs

<Jose>

15. This artist began the first of his "painted conversations" while under commission for his patron Pierre Crozat. The title figure plays the guitar on a bench and looks towards the sky in this artist's *Mezzetin*. In one of his paintings, a woman ignores the paintings all around her and stares in a mirror while men on the other side of the canvas put away a portrait of King (\*) Louis XIV. This frequent painter of the commedia dell'arte painted *Gersaint's Shopsign* and popularized the genre of the *fête galante*. In one version of his best known painting, putti dance in the air as young couples prepare to leave an island under the influence of Venus. For 10 points, name this French Rococo artist of *The Embarkation for Cythera*.

ANSWER: Antoine Watteau [or Jean-Antoine Watteau]

<Bentley>

16. A character with this surname is offended when his reading from Fordyce's Sermons is interrupted and effusively praises Lady Catherine de Bourgh. An author with this last name wrote a novel in which Count Fosco and Percival Glyde mastermind a plot involving the similar-looking Anne Catherick and Laura Fairlie, which is discovered by Marian Halcombe. That author of this surname penned a mystery in which Ezra Jennings helps prove Franklin Blake innocent of a (\*) jewel theft perpetrated by Godfrey Ablewhite. A character of this name is a clergyman who marries Charlotte Lucas after his proposal is rejected by Elizabeth Bennet in *Pride and Prejudice*. For 10 points, identify this last name of the author of *The Woman in White* and *The Moonstone*.

ANSWER: Collins [accept Wilkie Collins or William Collins]

<Schindler>

17. **This administrative region punished John Punch, a black runaway, more harshly than his white co-conspirators. This region traded away a boy named Henry Spelman, who helped it gather information on the town of Werowocomoco and rulers called *weroance*. A raid on Martin's Hundred by Opechancanough threatened this area. Its indigenous Doeg people were (\*) massacred by a colonist who died of dysentery while opposing William Berkeley. For 10 points, name this colony where relations with the Pamunkey tribes soured during Bacon's Rebellion, whose House of Burgesses dealt with the Powhatan Confederacy.**

ANSWER: Virginia Colony [accept Jamestown until "Doeg" is read]

<Jackson>

18. **An architect from this country designed the master plan for the Ordos 100 project in a neighboring country. An artist from this country created a facade made of children's backpacks for the Munich exhibit *So Sorry* and, for another exhibit, covered a large area of the Tate Modern Turbine Hall in hand-painted porcelain sunflower seeds. A ballet produced in this country features a rifle drill and a bayonet dance in its second act, is called *The* (\*) *Red Detachment of Women*, and appeared in a John Adams opera. An architect from this country collaborated with Herzog and de Meuron on its "Bird's Nest" Olympic stadium. For 10 points, name this home country of Ai Weiwei, in which the Eight Model Plays replaced the older Beijing opera.**

ANSWER: People's Republic of China [or Zhongguo; or Zhonghua Renmin Gongheguo; or PRC; do not accept "Republic of China"]

<Carson>

19. **According to a 2008 survey, this country has the world's least light pollution. This country's chief ethnic group was the subject of the "nightmare campaign" to bring them under French control, and are the Gbaya. This modern-day country was absorbed by the Rafai and Zemio sultanates when it was known as the colony of Ubangi-Shari. This country's plurality language is Sango, whose word for "union" names the (\*) Seleka militia that has brought it into a state of effective anarchy since the 2012 overthrow of Francois Bozizé. Along with Chad, the Republic of the Congo, and Gabon, this country comprised French Equatorial Africa. For 10 points, identify this country named for its position on the continent.**

ANSWER: Central African Republic [or Republique Centrafricaine]

<Weiner>

20. **Since an 1813 treaty, this country has controlled the Islamic city of Derbent. Ismail Gaspirali founded the religious reform movement of Jadidism in this country, which fought Sufi resistance leader Imam Shamil during the mid 19th century. This country's police circulated an unknown toxic gas through a (\*) movie theater in its capital to end a hostage crisis by Muslim militants from the same region as the earlier Hadji Murad. Aslan Maskhadov led resistance to this country from a separatist republic with capital at Grozny. For 10 points, name this country whose recent actions against militant Islam have included backing Syria's Bashar al-Assad at the UN and crushing an insurgency in Chechnya.**

ANSWER: Russia [or Russian Federation; or Russian Empire]

<Bollinger>

21. This book's preface compares the dislike of realism to Caliban's rage upon seeing his face in a glass. The protagonist of this novel purchases nine editions of a certain novel that are bound in nine different colors. That protagonist's father's death was arranged by his maternal grandfather Lord Kelso. This novel's preface concludes that "all art is quite useless" and claims that no book is (\*) moral or immoral, just well or poorly written. Its main characters meet with the Duchess of Monmouth to discuss the nature of love. This novel opens with an intellectual conversation between Lord Henry Wotton and the painter Basil Hallward. It ends with the title character rapidly aging after he stabs a painting. For 10 points, name this only novel by Oscar Wilde.

ANSWER: *The Picture of Dorian Gray*

<Jose>

22. The Schnabel method estimates this quantity as the sum of MC over R plus one, and is an extension of the Lincoln-Peterson method for determining it. In the Allee effect, fitness increases as this quantity increases. If p is allele frequency, then p times one minus p over the variance of p is the "effective" form of this quantity. The ratio of this quantity at consecutive time steps is called the finite rate of increase. Genetic diversity decreases when this quantity (\*) plummets during a bottleneck. The Hardy-Weinberg equation assumes that this value is infinite. According to the logistic equation, its time derivative is proportional to the difference between it and the carrying capacity. For 10 points, name this quantity estimated by mark-and-release.

ANSWER: population size [or population size; or population density; or N]

<Silverman>

23. One member of this family ordered that bronze intended for a huge a sculpture of him be made instead into weapons which won the battle of Fornovo. That member of this family was driven from his city for a year by Louis XII of France. After the demise of the Golden Ambrosian Republic, this house established rule over one city-state in 1450. Its Pesaro line was begun by (\*) Alessandro, who feuded with his ducal brother Francesco. Another duke from this family commissioned Leonardo da Vinci's *The Last Supper* and had a dark complexion leading to his nickname of "Ludovico il Moro." For 10 points, name this Italian noble family that supplanted the Visconti family and ruled at the turn of the 16th century as dukes of Milan.

ANSWER: Sforza family

<Hart>

24. The state is the site of Shellmound, where Troy Flavin joins the Fairchild family in a novel narrated by Laura McRaven. In another novel set in this state, the young Texan Fay helps bring the body of her husband, who dies after surgery to repair a detached retina, back here from New Orleans. Judge Clinton McKelva is buried by his daughter Laura Hand in Mount Salus in this state, which is the setting of (\*) Eudora Welty's *Delta Wedding* and *The Optimist's Daughter*. Plantations here included Sutpen's Hundred, whose story is told to Shreve McCannon by a resident of this state. Quentin Compson leaves this state's town of Jefferson to attend Harvard. For 10 points, name this state where William Faulkner created the fictional Yoknapatawpha County.

ANSWER: Mississippi

<Mehigan>

1. This character's fiancée Aude dies of grief on hearing the news that both he and his close companion Olivier, Aude's brother, have died. For 10 points each:

[10] Name this nephew of Charlemagne, the hero of an Old French *chanson de geste*, who dies when he blows the oliphant to alert the French army that his rearguard has been ambushed by Saracens at Roncevaux Pass.

ANSWER: **Roland** [accept *The Song of Roland* or *La Chanson de Roland*]

[10] *The Song of Roland* is written in stanzas called *laisses*, whose lines are divided by one of these pauses, usually after the fourth syllable. They can be explicitly indicated by a double vertical line or a double slash.

ANSWER: **caesurae** [or **caesuras**]

[10] This fiendish stepfather of Roland betrays him to the Saracens. When his treachery is discovered, his champion Pinabel loses a trial by combat and this man is pulled apart by horses.

ANSWER: **Ganelon**

<Carson>

2. The lines "And one of these days not too remote, you'll probably up and cut my throat." conclude Ogden Nash's response to this poem, which was also the subject of a "nymph's reply" by Sir Walter Raleigh. For 10 points each:

[10] Name this pastoral poem, first published in 1599, which opens with the title speaker's entreaty to "Come live with me and be my Love".

ANSWER: "The **Passionate Shepherd to His Love**"

[10] "The Passionate Shepherd to His Love" is by this contemporary of Shakespeare, who wrote of the exploits of Barabas in *The Jew of Malta*. and died in a tavern brawl.

ANSWER: Christopher **Marlowe** [or Kit **Marlowe**]

[10] This title character of a Marlowe drama declares that nature "Wills us to wear ourselves and never rest, / Until we reach that ripest fruit of all ... / The sweet fruition of an earthly crown". More characteristically, this military leader orders Bajazeth to be imprisoned within a cage and used as a footstool.

ANSWER: **Tamburlaine** the Great

<Bentley>

3. These things are typically classified based on whether there is a discontinuity in their order parameter or the first derivative of their order parameter. For 10 points each:

[10] Name these transformations observed when one state of matter becomes another state by the transfer of heat.

ANSWER: **phase transitions** [or **phase changes**]

[10] An example of a second-order phase transition is the transition from ferromagnetism to paramagnetism at this temperature. This temperature's namesake discovered piezoelectricity with his brother, Jacques.

ANSWER: **Curie** temperature [or Pierre **Curie**]

[10] The magnetic susceptibility above the Curie temperature is described by a law named for Pierre Curie and this scientist. The concept of domains in magnets was developed by this person, which is why they are sometimes named for him.

ANSWER: Pierre **Weiss**

<Voight>

4. The composer added lyrics to this piece for use as a "dream intermezzo" in his opera *Sorochintsy Fair*. For 10 points each:

[10] Name this tone poem which depicts the veneration of either Satan or the evil god Chernobog at a witches' sabbath.

ANSWER: **Night on Bald Mountain** [or *St. John's **Night** on the **Bare Mountain***; or *Ivanova noch' na lysoy gore*]

[10] *Night on Bald Mountain* - or at least, its original version - was written by this Russian member of the Mighty Five who composed *Pictures at an Exhibition*.

ANSWER: Modest Petrovich **Mussorgsky**

[10] Most of Mussorgsky's instrumental music is programmatic, in contrast to this kind of music, which exists simply for its own sake with no external program or message.

ANSWER: **absolute** music [or **abstract** music]

<Rosenberg>

5. Julian Juderias wrote a 1914 book titled for this topic "and the Historical Truth". For 10 points each:

[10] Give this term for the negative portrayal of Spain from its Golden Age through the nineteenth century. Its promoters emphasized Spain's persecution of Native Americans, Jews, and the Dutch.

ANSWER: **Black Legend** [or **Leyenda Negra**]

[10] This institution's persecution of religious dissenters contributed to the Black Legend. This institution carried out auto-da-fes under Tomas de Torquemada's leadership.

ANSWER: Spanish **Inquisition**

[10] A new edition of this author's *History of the Destruction of the Indies* brought back the Black Legend in 19th-century America. This Dominican friar argued in favor of Indian rights against Sepulveda, though he cared less about blacks.

ANSWER: Bartolome de **las Casas**

<Bentley>

6. A November 2013 article published in *Nature* announced that small molecules could bind to an allosteric pocket, S-IIP, on this protein, leading to its inhibition. For 10 points each:

[10] Name this protein which is activated in the first step of the MAP kinase signaling pathway. Defects in this protein are responsible for more than 25% of all cancers.

ANSWER: **Ras**

[10] In its active form, Ras is bound to this molecule. Signal transduction pathways often require G proteins, which bind this molecule. It is a molecular "switch" that alternates between phosphorylated and dephosphorylated states.

ANSWER: **GTP** [or **guanosine triphosphate**]

[10] G-protein coupled receptors normally localize to this structure. The fluid mosaic model describes this structure, which is a selectively permeable lipid bilayer on the outside of cells.

ANSWER: cell **membrane** [or plasma **membrane**; or **PM**]

<Silverman>



7. This philosopher claimed there were eternal, natural, human, and divine forms of law, and he held that the final end of man is beatitude, or union with God. For 10 points each:

[10] Name this Scholastic philosopher, a student of Albertus Magnus whose *Summa Theologica* articulates the Five Ways that aim to demonstrate the existence of God.

ANSWER: St. Thomas **Aquinas** [or Tommaso d'**Aquino**; prompt on "Thomas," "Doctor Angelicus," or "Doctor Universalis"]

[10] Aquinas formulated three conditions under which this action is just, including that it must be undertaken by a legitimate state. Hugo Grotius listed the just causes of this action and three rules governing conduct during it.

ANSWER: **war** [prompt on things like "fighting" or "conflict"]

[10] This philosopher argued for the elimination of all armed conflicts and the establishment of a realm of reason in his essay "Perpetual Peace". This man's distinction between analytic and synthetic statements is often called his "Copernican Revolution".

ANSWER: Immanuel **Kant**

<Kothari>

8. Tombs were first dug in the Valley of the Kings during this period, which included the reigns of Akhenaten, Tutankhamun, and Rameses II. For 10 points each:

[10] Name this last of three big divisions of classical Egyptian history, which followed after the Second Intermediate period. Colossal statues became more common in this period.

ANSWER: **New Kingdom** period [prompt on "Eighteenth Dynasty" or "Nineteenth Dynasty"]

[10] These mysterious invaders were expelled by Ahmose I, who inaugurated the New Kingdom. These possibly-Semitic people set up at Avaris and introduced chariots to Egypt.

ANSWER: **Hyksos**

[10] This New Kingdom pharaoh erased his stepmother, the female pharaoh Hatshepsut, from history. His excursions into Canaan included a victory against the Mittani Durusha at Megiddo.

ANSWER: **Thutmose III** [or **Tuthmosis** III; prompt on "Thutmose"]

<Jackson>

9. While at Swarthmore with Wolfgang Kohler, this man studied the role of key characteristics in forming impressions of other people. For 10 points each

[10] Name this Gestalt psychologist best known for studying how masses adopt incorrect opinions in his namesake conformity experiment.

ANSWER: Solomon **Asch**

[10] Asch also examined how perception of this type of media is affected by its credited source. This form of media is used to influence populations, often for nefarious purposes, and includes Uncle Sam posters and the Nazi film *Triumph of the Will*.

ANSWER: **propaganda**

[10] Asch's studies of how statements like "he is hot" and "she is cold" affect our perception of others led him to examine the ubiquity of this figure of speech. George Lakoff argued that cognitive forms of this figure of speech are necessary for understanding the inner workings of the mind.

ANSWER: **metaphor**

<Spencer>

10. The apocryphal Gospel according to this saint reports Jesus's cry from the cross as "my power, my power, thou hast forsaken me." For 10 points each:

[10] Name this brother of Andrew, a fisherman who was crucified upside down and regarded as the rock upon which Christ built his church.

ANSWER: Saint **Peter** [or Simon **Peter**]

[10] In the four Canonical gospels, Peter performs this action three times and then weeps after hearing the crowing of a cock, fulfilling a prediction made at the Last Supper.

ANSWER: **denying** Jesus [or **disowning Jesus**; forms of the word **denial** are all acceptable]

[10] In Acts 12, an angel comes by and performs this action on Peter; afterwards, Peter goes to the house of John Mark and Herod is eaten by maggots.

ANSWER: **frees him from prison** [or **liberates** him; or **busts him out** of jail]

<Gupta>

11. This author claimed, "I brought nothing back from the Klondike but my scurvy." For 10 points each:

[10] Name this author who told the story of a dog named Buck brought from Judge Miller's estate to Alaska in *The Call of the Wild*.

ANSWER: Jack **London** [or John Griffith **London**; or John Griffith "Jack" **Chaney**]

[10] Buck utters the call of the wild at the grave-site of this prospector who had earlier nursed him back to good health. Buck kills some Indians in retaliation for their shooting of this man.

ANSWER: **John Thornton** [accept either]

[10] Avis Everhard is the supposed author of this other Jack London novel, which has footnotes provided by the fictional scholar Anthony Meredith. This dystopian novel follows the rise of a trust called the Oligarchy.

ANSWER: *The **Iron Heel***

<Bentley>

12. The most famous work of art depicting one of these creatures includes a number of anatomical inaccuracies, including a back horn, scaly lower legs, and armor plates resembling actual plate armor, complete with rivets. For 10 points each:

[10] Identify this animal, the subject of a speculative woodcut by Albrecht Dürer.

ANSWER: a **rhinoceros** [or **Nashorn**; or **Rhinozeros**]

[10] Dürer's other famous works include a series of scenes from the Book of Revelation which includes this woodcut in which War, Death, Famine, and Pestilence ride out and trample people.

ANSWER: *The **Four Horsemen** of the Apocalypse* [or *Die **vier Reiter** der Apokalypse*]

[10] Dürer produced three gigantic woodcuts for Maximilian I depicting an arch, a procession, and a large carriage, all of which are described by this adjective. The arch was printed from 192 separate woodblocks.

ANSWER: **triumphal** [or **Triumph**]

<Carson>

13. Answer the following about the Chinese myth of the Great Race, for 10 points each.

[10] In most versions, this Daoist god, who became head of the celestial bureaucracy after eons of navel-gazing, adjudicates the race to assign animals to zodiac signs.

ANSWER: the **Jade Emperor** [or **Yu Huang**; or **Yu Di**]

[10] This winged creature took 5th place in the race after stopping to help rabbit. It is the only member of the zodiac that doesn't actually exist.

ANSWER: **dragons** [or **long**]

[10] This animal took the first spot in the 12-year cycle by riding on Ox and shoving Cat into the water at the last minute.

ANSWER: the **rat** [or the **mouse**]

<Bollinger>

14. Political parties such as the UK Independence Party and Alternative for Germany oppose membership in this organization. For 10 points each:

[10] Name this organization, which was created by the Treaty of Maastricht. Croatia recently became the 28th of its member states.

ANSWER: **European Union** [or **EU**]

[10] This term refers to the thirty-one-chapter legal code of the European Union. A series of negotiations is required for countries that wish to join the EU in order to enact compliance with these laws, named for a French term for "things agreed to."

ANSWER: Community **acquis**

[10] This country has been an official EU candidate country since 2005, but has not yet entered into accession negotiations, primarily due to a conflict with its southern neighbor over the official name of this country.

ANSWER: Republic of **Macedonia** [or Former Yugoslav Republic of **Macedonia**; or **FYROM**; or Republika **Makedonija**]

<Rosenberg>

15. Edmund Halley first observed that Aldebaran had a non-zero value for this quantity by comparing his measurements of Aldebaran to the measurements of Hipparchos of Rhodes. For 10 points each:

[10] Name this quantity, usually measured in arcseconds per year, which is defined as the change in position of a star over time when observed from either side of earth's orbit.

ANSWER: **proper motion**

[10] This scientist's namesake star has the highest proper motion of any known star. His namesake loop is found within Orion.

ANSWER: Edward Emerson **Barnard**

[10] Barnard's loop is an example of these interstellar dust clouds that contain large amounts of hydrogen and helium. They are often the site of star formation and examples include the Eagle, which is the subject of the famous "Pillars of Creation" photograph.

ANSWER: **nebulae**

<Jose>

16. This woman's *Persephone* is actually a dance set to Stravinsky's *Symphony in C*, and she often employed the sculptor Isamu Noguchi as a set designer. For 10 points each:

[10] Name this prominent 20th-century choreographer and dancer who commissioned a work features a number of variations on the Shaker hymn "Simple Gifts" in its seventh section.

ANSWER: Martha **Graham**

[10] That ballet is this man's *Appalachian Spring*. Agnes de Mille choreographed this composer's ballet *Rodeo*, which features a famous "Hoe-Down".

ANSWER: Aaron **Copland**

[10] Noguchi also designed sets for *Errand Into the Maze*, which Graham commissioned from this composer. This man won two Pulitzers for his operas *The Consul* and *The Saint of Bleecker Street*.

ANSWER: Gian Carlo **Menotti**

<Carson>

17. Answer the following about inadequacies of the valence bond model, for 10 points each:

[10] The valence bond model fails to predict that this diatomic gas is paramagnetic because it has unpaired electrons in antibonding pi orbitals. This gas is a reactant in most combustion reactions.

ANSWER: **oxygen** gas [or **O<sub>2</sub>**; or diatomic **oxygen**]

[10] The model cannot explain why water has this bond angle, rather than 109.5 degrees. Give your answer in degrees, rounded to the nearest tenth.

ANSWER: **104.5** degrees

[10] Valence bond theory can't explain why ions like tetra-ammine copper II have sp<sup>2</sup>d hybridization and, therefore, have this molecular geometry, rather than tetrahedral. Cisplatin and xenon tetrafluoride have this geometry.

ANSWER: **square planar** [prompt on partial answer]

<Silverman>

18. These people were targeted during the Porajmos in World War II, and thousands were deported from France under Nicolas Sarkozy. For 10 points each:

[10] Name these traditionally nomadic people of continental Europe, who can be further subdivided into the Kalderash and Manush groups. They originated in India.

ANSWER: **Romani** [or **Rom**; or **Roma**; or **gypsy**; or **gypsies**; or **gitanos**]

[10] This Warsaw Pact dictator, who used the Securitate police force and banned abortion with Decree 770, moved his country's Roma into ghettos. His execution by firing squad alongside his wife Elena was broadcast on TV.

ANSWER: Nicolae **Ceaușescu**

[10] The Kalderash traditionally held this occupation. On Saint Clement's Night, British holders of this profession sang hymns to "Old Clem."

ANSWER: **smiths** [or **blacksmiths**; or **metalsmiths**; or **metalworkers**; prompt on answers such as "people who make horseshoes"]

<Bentley>

19. In the prologue to this poem, a man stands on "a deserted, wave-swept shore" and asserts that he is "destined to cut a door to Europe wide". For 10 points each:

[10] Name this poem in which a flood of the Neva wipes out much of St. Petersburg, causing the death of Parasha, which prompts Evgeny to angrily curse the title depiction of Peter the Great, which comes to life and chases Evgeny to his death.

ANSWER: "The **Bronze Horseman**: A Petersburg Tale" [or "**Mednyj vsadnik**: Peterburgskaja povest'; or "The **Copper Horseman**"]

[10] "The Bronze Horseman" is a poem by this Russian author, whose other hits include the play *Boris Godunov* and the verse novel *Eugene Onegin*.

ANSWER: Alexander Sergeyevich **Pushkin**

[10] Pushkin describes a cat walking around a green oak and singing fairy tales in the prologue to this poem, in which one title character defeats his rivals Farlaf and Rogday and rescues the other title character from the wizard Chernomor.

ANSWER: **Ruslan and Ludmila** [or **Ruslan i Lyudmila**]

<Carson>

20. This scandal included the firing of Archibald Cox on a day that became known as the "Saturday Night Massacre." For 10 points each:

[10] Name this scandal. It began when G. Gordon Liddy and other Nixon employees broke into a D.C. hotel to wiretap the Democratic National Committee headquarters.

ANSWER: **Watergate** scandal [accept any answer indicating the break-in at the **Watergate** Hotel, or the ensuing scandal]

[10] This investigative journalist, who later wrote the book *State of Denial* about the second Bush administration, reported on the Watergate scandal with Carl Bernstein for the Washington Post.

ANSWER: Robert Upshur "Bob" **Woodward**

[10] This Chief of Staff for Nixon was imprisoned for his role in covering up Watergate. This close co-worker of John Ehrlichmann was talking to Nixon during the deleted "18-and-a-half minute gap" on the White House tapes.

ANSWER: Harry Robbins "Bob" **Haldeman**

<Bentley>

21. Rolle's Theorem is a special case of this theorem. For 10 points each,

[10] Name this result from calculus which states that  $f'(c) = \frac{f(b) - f(a)}{b - a}$  for a continuous function  $f$  on the closed interval  $a, b$  with  $c$  in the open interval  $a, b$ .

ANSWER: **mean value** theorem

[10] This French mathematician extended the mean value theorem to two functions,  $f$  and  $g$ . He also names an inequality with Hermann Schwarz which generalizes the triangle inequality to inner product spaces.

ANSWER: Augustin-Louis **Cauchy**

[10] Along with Édouard Goursat, Cauchy names a theorem which states that the contour integral along a path of a function  $f$  of  $z$  equals this value when  $f$  of  $z$  maps a simply connected open subset of  $\mathbb{C}$  to  $\mathbb{C}$ . Rules governing the use of this number were developed by the Indian mathematician Brahmagupta.

ANSWER: **zero** [or **el zilcho**; or **zip**; or **nada**; or obvious equivalents]

<Karas>

22. This author created characters like Janey Williams, who becomes a stenographer, and Fainy Mac, who works on and off as a printer. For 10 points each:

[10] Identify this author of *Manhattan Transfer* who included *The 42nd Parallel* in his *U.S.A.* trilogy.

ANSWER: John Roderigo **Dos Passos**

[10] Dos Passos' novel *Three Soldiers* is about John Andrews, Chrisfield and Dan Fuselli, who are enlisted men fighting in this conflict. Hemingway's *A Farewell to Arms* is also set during this war.

ANSWER: **World War I** [or the **First World War**; the **Great War**]

[10] In the *U.S.A.* trilogy, Dos Passos used four distinct narrative techniques, including one that collected small snippets of songs and newspaper headlines into sections with this title. They are not to be confused with the "Camera Eye" sections.

ANSWER: **"Newsreel"**

<Bentley>

23. This good names a 2005 revolution which overthrew Askar Akayev in Kyrgyzstan. For 10 points each:

[10] Name this rare flower which set off an economic "mania" in the 17th-century Dutch Republic as obsessed customers tried to buy them.

ANSWER: **tulips** [or **Tulip** Revolution; or **tulip** mania]

[10] This empire went through its "Tulip period" in the 18th century. It tried to besiege Vienna with janissaries twice and subdued Byzantine Constantinople.

ANSWER: **Ottoman** Empire [or **Ottoman** Turks; or **Osmaniyye** other turkish words here]

[10] This later period of modernizing Ottoman reforms kicked off with the florally-named Rose Chamber rescript, which cracked down on tax farming.

ANSWER: **Tanzimat** reforms [or **Tanzimat** era]

<Jackson>