1. In one novel by this author, Prince Nekhlyudov visits a prison after the maid Maslova is wrongly convicted of murder. In one of his stories, the servant Gerasim helps the title bureaucrat come to terms with his impending death. This author of Resurrection and The $\mathbf{(}^{*}$ ) Death of Ivan Ilyich wrote a novel that begins, "Happy families are all alike." In that novel, the title character loses status after having an affair with Vronsky before throwing herself in front of a train. For 10 points, name this Russian author of Anna Karenina.
ANSWER: Leo Tolstoy [or Lev Nikolayevich Tolstoy]
2. One law derived by this scientist states that the time derivative of temperature is equal to the negative of a constant $k$ times the temperature difference between an object, or substance, and the ambient temperature; that is his law of cooling. A constant used in another law due to this scientist is equal to ${ }^{(*)} 6.67$ times ten to the minus eleven and is symbolized big G. Both this scientist and Gottfried Leibniz are credited with discovering calculus. For 10 points, identify this discoverer of a universal law of gravitation.
ANSWER: Sir Isaac Newton
066-13-75-05102
3. One of this man's writings imagines a white horse and a darker, wilder horse pulling the chariot of the soul. He also described a man suing his father, who is asked whether the love of the gods causes or merely recognizes piety. This philosopher argued for banning art because imitations are too far removed from the ideal (*) Forms. He related the allegory of the cave in a work about devising justice in the optimal city. For 10 points, name this Greek whose Phaedrus, Euthyphro, and Republic are dialogues featuring his master Socrates.
ANSWER: Plato [or Platon; or Aristocles]
104-13-75-05103
4. This man quoted the folk song "Sunce jarko" in a work that depicts the tyranny of the Turks, Marche Slave. He dedicated his fourth symphony to his patron, Nadezhda von Meck, and musically depicted a Lord Byron poem about a maddened wanderer in an unnumbered symphony. This composer of the 'Manfred" Symphony repeatedly quoted (*) "La Marseillaise" in a piece commemorating Napoleon's defeat, which includes a climactic volley of cannon fire. For 10 points, name this Russian composer of the 1812 Overture.
ANSWER: Pyotr Ilyich Tchaikovsky
5. One of this man's chief opponents was Jacobus Latomus. This man argued that Matthew 16:18 did not grant papal infallibility, leading to his excommunication in the bill Decet Romanum Pontificem. This man debated Huldrych Zwingli at the Marburg Colloquy. An articulation of this man's beliefs was given during the $\mathbf{~}^{*}$ ) Diet of Worms. This man criticized Johann Tetzel, who arrived in Wittenberg selling indulgences. For 10 points, name this author of the Ninety-Five Theses who sparked the Protestant Reformation.
ANSWER: Martin Luther
6. This island is north of a seamount that was at one time an island named Graham Island, Julia, and Ferdinandea by various feuding countries. The village of Mascali on it was obliterated in two days in 1928. This island's northeast is dominated by the Nebrodi mountain range. North of it is the small Aeolian Islands, including the explosive (*) Stromboli. This island contains the tallest active volcano in Europe, Mount Etna. For 10 points, name this largest island in the Mediterranean Sea separated by the Strait of Messina from Italy.
ANSWER: Sicily
7. One movie directed by this man features a character who warns "don't touch my levels" and lures Beaumont into a trunk. In another film he directed, a character explains that a Quarter Pounder with Cheese in France is a (*) "Royale with Cheese." Another film by this director features a soldier familiar with German cinema who is assisted by Bridget von Hammersmark. That film by this director includes Hans Landa, nicknamed the "Jew Hunter," played by Christoph Waltz. For 10 points, name this American director of Pulp Fiction, Inglourious Basterds, and Django Unchained.
ANSWER: Quentin Tarantino
8. This dynasty sent Ma Yuan to put down the rebellion of the Trung sisters in Vietnam. During this dynasty, Wang Mang briefly seized control of the country and established the Xin (SHIN) Dynasty. This dynasty ended with the split into Wu, Shu, and Wei (WAY) that marked the beginning of the Three Kingdoms period. A rebellion led by Liu Bang led to the start of this dynasty, which succeeded the $\left({ }^{*}\right)$ Qin (CHIN) Dynasty in 206 BCE. For 10 points, name this Chinese dynasty that is the namesake of China's present-day dominant ethnicity.
ANSWER: Han Dynasty
014-13-75-05108
9. One of this author's stories concerns an Eastern, a Cowboy, Johnny, and a Swede who play High Five at Scully's establishment. That story appeared in a collection with this author's The Monster and is titled 'The Blue Hotel." A cook, an oiler, and a captain survive in this author's 'The (*) Open Boat," and he wrote of a youth who befriends Jim Conklin while fighting in the Civil War in one of his novels. For 10 points, identify this American author who wrote about Henry Fleming in The Red Badge of Courage.
ANSWER: Stephen Crane
10. The lysis of foam cells triggers the activation of these cells, which contain alpha and dense granules. These cells are activated when they run into collagen and begin adhering to collagen when they bind to von Willebrand factor. Clopidogrel and aspirin inhibit the function of these cells, which are created by fragmentation of (*) megakaryocytes. They use fibrinogen to mediate their clumping together in coagulation. For 10 points, name these cells involved in blood clotting.
ANSWER: platelets [or thrombocytes]
11. In China, classical examples of this literary form include The Circle of Chalk and The Peony Pavilion, while more modern examples include Gao Xingjian's Bus Stop. In Japan, The Love Suicides at Sonezaki exemplifies the $\left(^{*}\right)$ Bunraku type of this literary form, and other Japanese types include Noh and Kabuki. For 10 points, name this literary form, English examples of which include Much Ado About Nothing and Romeo and Juliet.
ANSWER: plays [or drama]
12. One book by this mathematician introduced the notion of algorithms to Europe. That book also introduced the Hindu-Arabic numeral system and is his Liber Abaci. The ratio of successive numbers of a sequence named for this mathematician approaches the $\left({ }^{*}\right)$ golden ratio, phi. That sequence is generated by considering the growth of a population of rabbits. For 10 points, name this Italian mathematician who names a sequence that begins $1,1,2,3,5$.
ANSWER: Fibonacci [or Leonardo of Pisa; or Leonardo Pisano; or Leonardo Bigollo]
066-13-75-05112
13. This figure was left as a baby on Mount Parthenius after being abandoned by her father, Iasus. According to some sources, she bore Parthenopaeus with Ares, and two centaurs named Hylaeus and Rhaecus attempted to rape her. Her husband and her were turned into lions for having sex in a temple of Zeus. This woman married Hippomenes after he distracted her with (*) golden apples during a footrace, and she was loved by Meleager. For 10 points, name this huntress from Greek myth who participated in the hunt for the Calydonian boar.
ANSWER: Atalanta
192-13-75-05113
14. The libretto to this opera was written by Emanuel Schikaneder, who premiered one of its iconic roles. The composer's sister in law Josepha Hofer was the first to perform a soprano role in this opera that requires hitting several high F6 notes in an aria about how 'Hell's vengeance boils in my heart." In this opera, which includes the villainous character Monostatos, (*) Tamino undergoes trials at the court of Sarastro in order to marry Pamina, all while being thwarted by Pamina's mother, the Queen of the Night. For 10 points, name this opera that includes Papageno, composed by Mozart.
ANSWER: The Magic Flute [or Die Zauberflöte]
15. This man's sister Freydis made a business agreement with Helgi and Finnbogi, then killed them. After converting to Christianity, he was sent on a missionary expedition by Olaf Trygvasson. Succeeded by his son Thorkell, this leader earned the epithet 'the Lucky" after saving a ship's crew. A colony founded by him is thought to have its remains at (*) L'anse aux Meadows
("lance"-oh-"meadows"). For 10 points, name this man who established the settlement of Vinland in present-day Newfoundland, a son of Erik the Red.
ANSWER: Leif Ericson the Lucky [or Leiv Eriksson den Hepne]
16. The Fisher equation calculates the "real" form of this quantity by adding the inflation rate to its "nominal" form. Increasing this quantity moves the equilibrium point away from liquidity preference and towards money supply, and it is thus the vertical axis of the IS-LM model. The "crowding out" hypothesis suggests that deficit spending risks increasing this quantity, which is manipulated in (*) monetary policy. For 10 points, name this quantity determined by the Federal Reserve, defined as the rate at which borrowers pay extra to use loaned money.
ANSWER: interest rates
17. This artist depicting a ghostly man floating in the air to kiss his wife in his painting The Birthday. The upper left of another painting by this man shows a red flag-carrying army; its center depicts Jesus on the cross over a menorah. This painter also created a work in which a man in black with a scythe walks towards a violinist near a row of $\left(^{*}\right)$ upside-down houses. In the most famous painting by this artist of White Crucifixion, a goat stares at a green-faced man holding a tree. For 10 points, name this French Jewish painter who created the work I and the Village.
ANSWER: Marc Chagall
18. This work begins with characters gathered at the Tabard Inn in Southwark. One story in this work describes a man who marries an old hag after she tells him what women desire the most. Another story in this work shows how (*) Theseus forces a large battle for Emily's hand between Palamon and Arcite. Those stories in this work are told by the Knight and the Wife of Bath. For 10 points, name this collection of stories told by English pilgrims, written by Geoffrey Chaucer.
ANSWER: The Canterbury Tales
023-13-75-05118
19. During this battle, Lew Wallace's soldiers went off route and got lost. One side in this engagement retreated through the Corinth Road; that side's commander was replaced by P.G.T Beauregard after he was fatally wounded. This battle was preceded by one side taking Fort Henry and Fort Donelson. Benjamin Prentiss surrendered the Hornet's Nest during this battle, after being raided by (*) Albert Sidney Johnston, who died in this battle. For 10 points, name this 1862 victory for Ulysses S. Grant in Tennessee.
ANSWER: Battle of Shiloh [or Battle of Pittsburg Landing]
20. Electrolytes are usually an example of these substances. One type of property of these substances depends only on the number of particles, not their identity, and are colligative properties. The vapor pressure of these substances can be found with (*) Raoult's law. They can be supersaturated, and one measure used with them is molality. For 10 points, name this mixture that consists of a solvent and a substance dissolved in it.
ANSWER: solutions [prompt on homogenous mixtures]
066-13-75-05120
21. In this novel, Carlson shoots an old useless dog on the advice of another character to the dog's owner. One character in this novel is befriended by the black stable-hand (*) Crooks and was forced out of one area because of an incident with the red-dressed girl in Weed. In this novel, the death of Curley's wife puts an end to the dream of living off the fat of the land for George Milton and Lennie Small. For 10 points, name this short novel by John Steinbeck.
ANSWER: Of Mice and Men
023-13-75-05121
22. Traps named for this material are deployed to collect both it and marine snow. Turbidity currents carry this material. The portion of this material that does not touch the bed of a river is called the suspended load. When it contains high proportions of skeletal material, it is called biogenic (*) ooze. Classes of this material include boulders, pebbles, silt and clay. For 10 points, identify this material that is deposited by water, wind, or glaciers and forms a namesake type of rock. ANSWER: sediment
23. Gheorghe Apostol and Silviu Brucan were arrested for signing the "Letter of the Six" attacking extremist policies in this country. This country was the only member of the Warsaw Pact to oppose the Soviet Union's invasion of Czechoslovakia. This country was controlled by the National Salvation Front, or FSN, in the aftermath of its 1989 revolution overthrowing the dictatorial successor of (*) Gheorghe Gheorghiu-Dej. For 10 points, name this Eastern European country once ruled by Nicolae Ceausescu (chou-SHESS-cue).
ANSWER: Romania
24. Answer the following about religion in the Pacific Islands, for 10 points each:
[10] This term describes any of several religious movements in Melanesia sometimes associated with the figure of John Frum. These movements seek and await the namesake wares from more technologically advanced cultures.
ANSWER: cargo cults
[10] Pitcairn Islands are inhabited by the descendants of the mutineers of the HMS Bounty and its entire population are part of this Millerite Christian denomination which observes a Saturday sabbath.
ANSWER: Seventh Day Adventist Church
[10] Tonga has a higher percentage of adherents to this faith than any other country in the world. It was founded by Joseph Smith.
ANSWER: Church of Jesus Christ of Latter-day Saints [or Mormon Church; or LDS Church]
030-13-75-05201
25. This character plays host to Ned Land and Pierre Arronax. For 10 points each:
[10] Name this captain of the Nautilus.
ANSWER: Captain Nemo
[10] Captain Nemo appears in Twenty-Thousand Leagues Under the Sea, a novel by this French author of Around the World in Eighty Days.
ANSWER: Jules Verne
[10] In this Verne novel, a German professor discovers dinosaurs and other prehistoric life after entering an Icelandic volcano.
ANSWER: A Journey to the Center of the Earth [or Voyage au Centre de la Terre]
015-13-75-05202
26. In one scene from this man's first talkie, he plays a dictator bouncing an inflated globe in the air until it pops. For 10 points each:
[10] Name this actor who starred in The Great Dictator and played the "Little Tramp" character in movies like City Lights.
ANSWER: Charlie Chaplin
[10] Chaplin was originally from this country, the home of the Archers film studio and the director David Lean.
ANSWER: United Kingdom [or England; or Great Britain]
[10] Norma Desmond does a Charlie Chaplin impression in one scene of this movie. This Billy
Wilder-directed film is narrated by Joe Gillis, who begins the movie lying dead in a swimming pool.
ANSWER: Sunset Boulevard
27. For 10 points each, answer these questions about a branch of mathematics called linear algebra.
[10] Linear algebra deals with namesake "spaces" of these quantities that have magnitude and direction.
ANSWER: vectors
[10] One of these objects can be multiplied by a vector to express a linear transformation. Symmetric ones equal their own transpose, and Gaussian elimination puts one in row-echelon form.
ANSWER: a matrix [or matrices]
[10] In linear algebra, these scalars associated with a matrix, symbolized lambda, solve the characteristic polynomial.
ANSWER: eigenvalues
104-13-75-05204
28. This painting hangs in the Contarelli Chapel beside the artist's paintings of the "martyrdom" and "inspiration" of the same title man. For 10 points each:
[10] Name this painting of Biblical figures in modern dress in which Jesus points from the right of the frame at a bearded tax collector seated with four other people at a table.
ANSWER: The Calling of Saint Matthew
[10] The Calling of Saint Matthew was painted by this Italian Baroque artist who pioneered tenebrism and painted The Supper at Emmaus.
ANSWER: Caravaggio [or Michelangelo Merisi]
[10] In another Caravaggio painting, two people playing with these objects both cheat; one has extra ones tucked in his belt, the other is getting help from an older man. Paul Cezanne painted five scenes of people playing with these objects.
ANSWER: cards
014-13-75-05205
29. In this novel, Bernard Marx and Lenina Crowne take a vacation to the Savage Reservation. For 10 points each:
[10] Name this novel set in 632 in the Year of Our Ford.
ANSWER: Brave New World
[10] Brave New World was written by this British author of Point Counter Point.
ANSWER: Aldous Huxley [or Aldous Leonard Huxley]
[10] After leaving society, John the Savage lives in one of these buildings where he hangs himself at the end of the novel.
ANSWER: a lighthouse
015-13-75-05206
30. This law can be stated in an equation as $V$ over $T$ equals $K$. For 10 points each:
[10] Name this gas law that describes the direct ratio of volume and temperature at constant pressure.
ANSWER: Charles's law
[10] This gas law, written as PV equals nRT, combines Charles's law with Boyle's law, Gay-Lussac's law, and Avogadro's law.
ANSWER: ideal gas law
[10] This gas law explains that the solubility of a gas in a liquid depends on the partial pressure of the gas on the liquid.
ANSWER: Henry's law
31. This character barely escapes after stealing from Reverend Bunting, and is finally brought to justice by a mob rallied by Arthur Kemp. For 10 points each:
[10] Name this albino medical student whose real name is Griffin and who likes to experiment with optical density.
ANSWER: The Invisible Man
[10] The Invisible Man was written by this author of War of the Worlds and The Time Machine.
ANSWER: H. G. Wells [or Herbert George Wells]
[10] In The Time Machine, the protagonist barely escapes from a future in which this submissive species is harvested by the Morlocks.
ANSWER: Eloi
015-13-75-05208
32. Answer the following questions about the Second Bank of the United States, for 10 points each.
[10] This President successfully opposed the existence of the Second Bank, preventing the renewal of its charter.
ANSWER: Andrew Jackson
[10] This president of the Second Bank failed to prevent the Bank's demise.
ANSWER: Nicholas Biddle
[10] The rampant speculation following the Second Bank's end and the issuing of the Specie Circular helped lead to this financial panic that ruined Martin Van Buren's term in office.
ANSWER: Panic of $\mathbf{1 8 3 7}$
140-13-75-05209
33. In this experiment, one participant was nicknamed "John Wayne" due to his brutality. For 10 points each:
[10] Name this experiment, in which participants acted as guards or prisoners to study their interactions. It was a debacle and was stopped after six days.
ANSWER: Stanford prison experiment
[10] Experiment overseer Philip Zimbardo later used the Stanford prison experiment to explain "the Lucifer effect," including justifying the actions of American guards at this Iraqi prison.
ANSWER: Abu Ghraib
[10] In another psychological test conducted at Stanford, children were asked either to eat one of these treats immediately, or wait some time to receive more than one.
ANSWER: marshmallows
140-13-75-05210
34. This ruler married Zoe Paleologus and made an alliance with Mengli Khan Giray of Crimea. For 10 points each:
[10] Name this man who began the pomestie system and who strove to centralize the administration of Russia as Grand Prince of Moscow in the late fifteenth century.
ANSWER: Ivan III [or Ivan the Great; or Ivan Veliky; prompt on Ivan]
[10] Ivan III's work consolidating a Russian state was completed by this man, the first to be crowned "Tsar of All Russia." He was given his epithet for his harsh treatment of the boyars.
ANSWER: Ivan the Terrible [or Ivan IV; or Ivan Grozny; prompt on Ivan]
[10] The Rurik Dynasty to which Ivan III and Ivan the Terrible belonged was succeeded by the Romanov family, who began their control of Russia with the rule of this tsar.
ANSWER: Michael [or Mikhail Fyodorovich Romanov]
35. One form of this deity, Kalki, will appear at the end of the present age, the Kali Yuga. For 10 points each:
[10] Name this Hindu preserver god, a member of the Trimurti who has several different avatars, one of whom is Rama.

## ANSWER: Vishnu

[10] This avatar of Vishnu appears in the Bhagavad-Gita, where he gives advice to Arjuna as his charioteer.
ANSWER: Krishna
[10] The first avatar of Vishnu is Matsya, who took the form of a fish and warned this man, the progenitor of the human race, of the coming flood.
ANSWER: Manu
192-13-75-05212
13. This author wrote a series of very short stories called the Palm-of-the-Hand Stories. For 10 points each: [10] Name this author who wrote about Shimamura meeting a geisha named Komako at a hot springs town in the book Snow Country.
ANSWER: Yasunari Kawabata
[10] Kawabata hailed from this country and became the first author from this country to receive the Nobel Prize for Literature.
ANSWER: Japan [or Nippon; or Nihon]
[10] In Snow Country, the protagonist is supposedly an expert on this art form which he has never actually seen performed.
ANSWER: ballet [prompt on dance]
052-13-75-05213
14. The sections of this work are linked by interludes known as "promenades." For 10 points each:
[10] Name this Modest Mussorgsky piano suite depicting several Viktor Hartmann pieces in an art gallery, including sections such as "The Old Castle" and "The Great Gate of Kiev."
ANSWER: Pictures at an Exhibition [or Kartinki s vystavki]
[10] Modest Mussorgsky was part of a group of this many Russian composers known as the Mighty Handful. There are this many black keys in an octave.
ANSWER: five
[10] A 16th note triplet tremolo appears in a movement from the suite depicting this old woman from Russian folklore.
ANSWER: Baba Yaga
15. Answer some questions relating to Coulomb's law, for 10 points each.
[10] Couloumb's law contains two terms for this quantity, symbolized q. For an electron, it is about negative 1.6 times ten to the negative nineteen coulombs.
ANSWER: charge
[10] In the denominator of the expression for Coulomb's law, the distance between the charges is raised to this positive integer power.
ANSWER: two
[10] The Coulomb constant, $k$, can be rewritten as one over this integer times pi times permittivity of free space.
ANSWER: four
16. The "Nine Jewels" were court members under one king of this dynasty. For 10 points each:
[10] Identify this Muslim empire that ruled over India. Its leaders included Shah Jahan, who erected the Taj Mahal in honor of his wife.
ANSWER: Mughal Empire
[10] This Mughal emperor, the grandson of Babur, ruled during the height of the empire and established the dahsala tax on agriculture. He had a general named Bairam Khan, and founded Din-i-Ilahi.
ANSWER: Jalaluddin Muhammad Akbar the Great
[10] Another Mughal ruler, Aurangzeb, reinstated the jizya tax, which was initially abolished by Akbar.
The jizya tax was levied on this subclass of the general citizenry.
ANSWER: non-Muslims [accept clear equivalents like people who weren't Muslims or people who did not follow Islam]

189-13-75-05216
17. This first step in cellular respiration creates a net gain of 2 ATP. For 10 points each:
[10] Name this metabolic process that occurs in the cytoplasm, in which glucose is broken down into two three-carbon molecules.
ANSWER: glycolysis
[10] This is the end result of glycolysis. It is converted to acetyl-coA before it enters the Krebs cycle, and is converted to lactic acid in fermentation.
ANSWER: pyruvate [or pyruvic acid]
[10] This other cellular process achieves the opposite result of glycolysis, and uses many of the same enzymes. Its first step sees pyruvate get converted to oxaloacetate.
ANSWER: gluconeogenesis
18. One speech to this man asked him "How long...must you continue to abuse our patience?" and exclaimed "O tempora! O mores!" For 10 points each:
[10] Name this Roman who died in battle after being accused of conspiring to assemble an army in Etruria to overthrow the Republic.
ANSWER: Catiline [or Lucius Sergius Catilina]
[10] Catiline's main accuser was this renowned orator and consul for 63 BCE, who also wrote treatises such as De Re Publica and denounced Julius Caesar.
ANSWER: Marcus Tullius Cicero [or Tully]
[10] Cicero delivered a set of fourteen Philippics against this drunkard, who had Cicero killed while holding power after Caesar's death. He became a lover of Cleopatra.
ANSWER: Mark Antony [or Marcus Antonius]
104-13-75-05218
19. The protagonist of this novel has an illegitimate daughter named Pearl. For 10 points each:
[10] Identify this novel by Nathaniel Hawthorne, which focuses on the punishment of Hester Prynne following her adultery.
ANSWER: The Scarlet Letter
[10] Although Hester Prynne engaged in an affair with Arthur Dimmesdale, her husband is this man. He intensifies Dimmesdale's guilt after he is called to care for him.
ANSWER: Roger Chillingworth [or Roger Chillingworth]
[10] This woman, based on a woman who was actually executed for witchcraft, unsuccessfully attempts to get Hester Prynne to engage in witchcraft.
ANSWER: Mistress Hibbins
20. This lake's largest island is Isle Royale, which itself contains lakes such as Siskiwit and Chicken Bone. For 10 points each:
[10] Name this largest Great Lake.
ANSWER: Lake Superior
[10] One of the largest cities on Lake Superior is this Minnesota city, which forms a metropolitan area with Superior, Wisconsin and sits on a harbor formed by St. Louis Bay.
ANSWER: Duluth
[10] Madeline Island is the largest of this group of islands on Lake Superior, which were named by Francois Xavier de Charlevoix because he thought there were twelve of them.
ANSWER: Apostle Islands
015-13-75-05220
21. This man was killed near Lake Como by partisan fighters. For 10 points each:
[10] Name this man known as "Il Duce" who led fascist Italy throughout World War II.
ANSWER: Benito Amilcare Andrea Mussolini
[10] Throughout Mussolini's time as leader of Italy, the third ruler with this name served as the Italian king.
The same ruler with this name was also king during Italy's involvement in World War I.
ANSWER: Victor Emmanuel III
[10] Mussolini later ruled a puppet state of Nazi Germany known as the Italian Social Republic. It was based in this town on Lake Garda, which explains the other name for the state.
ANSWER: Salo

