LOGIC (Lots of Good Interesting Content)
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Packet 13

Tossups

1. **In one painting of this subject, he tucks an umbrella under his right arm as he stands over a cloudy mountain background. That portrayal of this subject in a green coat has been printed over 900 million times. This person's alleged status as "the most famous man in the world" inspired one artist's silkscreen series depicting this figure. Those Andy Warhol paintings of this** (*) political figure are based on a portrait from one of his book covers. A massive portrait of this figure hangs over the gate to Tiananmen Square. For 10 points, name this first Chairman of the Communist Party of China.
ANSWER: **Mao** Zedong [or **Mao** Tse-tung] <DB, Visual Fine Arts>

2. **The narrator of this story tries biting off the corner of a "fairly-gnawed" bed in order to move it after dropping her room key out the window. The husband of this story's narrator threatens to take her to the physician Weir Mitchell, a real-life figure who treated this story's author. This story's title object reminds the narrator of "fungus growths" that "shriek with derision," and the maid Jennie remarks that it rubs off on the narrator's clothes. The narrator of this story tells her husband "I've (*)** got out at last" after freeing what she believes to be a "creeping" woman behind the title object. For 10 points, name this story titled for the horrid coverings of an old nursery, written by Charlotte Perkins Gilman.
ANSWER: "The **Yellow Wallpaper**" <EA, Short Fiction/Other>

3. **This opera's overture is structured like a four-movement symphony, with its first section marked "Prelude: Dawn." At the beginning of this opera, Arnold refuses to participate in the Shepherd Festival, due to his longing for Mathilde. The main character of this opera directs his son to think of his mother in the aria "Sois immobile." An english horn and flute exchange peaceful passages in the** *ranz des vaches* **in this opera's (*)** overture, which ends with a section marked "March of the Swiss Soldiers." An archer shoots an apple off of his son's head in, for 10 points, what opera by Gioacchino Rossini?
ANSWER: *William Tell* [or *Guillaume Tell*] <DB, Other Fine Arts>

4. **Coalescence theory uses the Wright-Fisher model to predict the time in the past at which two of these entities "merge." The frequency of one of these entities reaches maximum during fixation. Population stratification exists when there exists systematic differences in the frequencies of these entities, which can occur when (*)** Hardy-Weinberg equilibrium is violated. Pairs of these entities are segregated during gamete formation, according to Mendel's law of segregation. Dominant examples of these entities are always expressed over recessive examples. For 10 points, name these variants of a gene.
ANSWER: **allele**s [prompt on genes; prompt on phenotypical traits; prompt on phenotype; prompt on genotype]
<GC, Biology>

5. **The Family Pacts were a set of agreements between various branches of this dynasty. Francois Ravaillac assassinated a ruler from this dynasty, which was supported by the Legitimists. The Hundred Days was a brief interruption of this dynasty's namesake "restoration," and this dynasty gained power in Spain under** (*) Philip V. One ruler from this dynasty revoked the Edict of Nantes, ending toleration of Protestants. Henry IV was the first king from this dynasty, whose later rulers built the Palace of Versailles and were killed during the French Revolution. For 10 points, Louis XIV and Louis XVI were from what French royal dynasty?
ANSWER: House of **Bourbon** [Accept **Bourbon** Dynasty; or the **Bourbon** Restoration; prompt on House of Capet or Capetian Dynasty] <GP, European History>

6. **This god is the subject of a massive epic by Nonnus, in which he attacks India after the death of his lover Ampelos. This god causes the women of Argos to kill their children shortly after he marries Ariadne on Naxos. This god's first form, Zagreus, was slaughtered by the Titans. This god was sewn into Zeus's (*)** thigh after his mother was burned alive for looking at Zeus in his full splendor. King Pentheus was dismembered by a group of female followers of this god, known as the Maenads. This god gained his purview from a vine that grew from Ampelos's grave. For 10 points, name this Greek god of wine and partying.
ANSWER: **Dionysus** [prompt on Bacchus] <EA, Mythology>

7. **This court case was rebuked by a man who criticized the decision by saying "you seem to consider judges the ultimate arbiter of all constitutional questions." This case was decided a week before the related *Stuart v. Laird*, which focused on a law that would have led to the plaintiff of this case being named as Justice of the Peace. The plaintiff of this case wanted a (*)** writ of mandamus to be issued so he could receive his commission as a "Midnight Judge." This case overturned an earlier Judiciary Act, the first US law to be overturned. In this case's decision, John Marshall declared the existence of judicial review. For 10 points, name this landmark 1803 Supreme Court case, argued by the future fourth president.
ANSWER: *William **Marbury** v. James **Madison*** [accept either part and in either order] <AN, American History>

8. **This author began some of his novels with notes from fictional editors named Lawrence Templeton and Jebediah Cleishbotham. In a novel by this author, Jeanie travels to London to get a pardon for her sister, Effie Deans. That novel appears in this author's *Tales of My (*)* Landlord** collection. In this author's most famous novel, the archer Locksley is revealed to be Robin Hood, and the title character wins a jousting tournament while disguised as Desdichado. The title character of that novel by this man had earlier fought with King Richard in the crusades and fallen in love with Lady Rowena. For 10 points, name this Scottish author of *Ivanhoe*.
ANSWER: Walter **Scott** [or Sir Walter **Scott**, 1st Baronet] <WG, Long Fiction>

9. **These structures are implemented incorrectly in a fencepost error. During compilation, these structures are often optimized with a procedure called "unrolling." The continue keyword passes control on to the next one of these structures within a program. Nesting one of these structures in another creates a program with a big O of n squared runtime. The keywords (*)** in, for, and while are used to declare one of these structures. If one of these structures lacks a terminating condition, it will run infinitely until the computer runs out of memory. For 10 points, name these blocks of code, which repeatedly execute their contents until a condition is met.
ANSWER: **loop**s <GC, Computer Science>

10. **This politician's erroneous claim that Iranian detainee Nazanin Zaghari-Ratcliffe had been "teaching people journalism" was used as evidence to try to double her sentence. Andrew Patrick intervened to inform this politician that the Shwedagon Pagoda was an inappropriate venue to recite Kipling's "The Road to Mandalay." This politician's supporters were accused of vote-rigging to eliminate Michael Gove in a recent election. This politician controversially moved to (*)** prorogue parliament after succeeding Theresa May to set his government's Brexit agenda. For 10 points, name this former mayor of London and current British Prime Minister.
ANSWER: Boris **Johnson** [or Alexander Boris de Pfeffel **Johnson**] <DD, Current Events>

11. **Thiosulfate ions and starch are usually added to solid iodine in a form of this technique called iodometry. Another form of this lab technique uses Eriochrome Black T, along with a hexadentate ligand with four carboxylic acid groups known as EDTA; that is its "complexometric" type. Its "redox" type may use potassium permanganate, which is especially useful due to its role as a (*)** "self-indicator." This procedure is commonly conducted by slowly dripping a solution of known concentration from a burette into a flask until the equivalence point. For 10 points, name this lab technique used to determine an unknown solution's concentration.
ANSWER: **titration** [or **volumetric analysis**; accept complexometric **titration**; accept redox **titration**; accept acid-base **titration**] <LZ, Chemistry>

12. **The Uva rebellion broke out in this country against colonial rule. This modern-day country was known to Arab and Persian traders as Serendib, and the ancient king Kassapa constructed the Sigiriya rock fortress in this country. The Portuguese presence in this modern-day country was eliminated by a Dutch-allied kingdom known as** (*) Kandy. The Anuradhapura kingdom was located in this modern-day country, where the Tamil Tigers waged a civil war against the majority-Buddhist Sinhala population. For 10 points, name this small island country located near the southern tip of India.
ANSWER: **Sri Lanka** [or **Ceylon**; or the Democratic Socialist Republic of **Sri Lanka**; or **Ilangai** Jananayaka Socialisa Kudiarasu; or **Sri Lanka** Prajatantrika Samajavadi Janarajaya] <GP, World History>

13. **This thinker proposed that the process of disenchantment led to the secularization of society, bringing it to a state of modernity. This thinker listed goal-rationality and custom as two of four "Ideal Types" of understanding behavior, or Verstehen. This thinker stated that being ruled is a fact of life in a work that called the state a "monopoly of the legitimate use of physical (*) force."** This author of "Politics as a Vocation" connected the economic growth of certain countries with belief systems, such as Calvinism, that spawned after the Reformation. For 10 points, name this early German sociologist, who wrote *The Protestant Ethic and The Spirit of Capitalism*.
ANSWER: Max **Weber** [or Maximilian Carl Emil **Weber**] <EA, Social Science>

14. **In this work, a pillar that measures the depth of seawater glows when its rightful owner approaches it. Another character in this novel is the reincarnation of Golden Cicada and chants a headache spell to control one of his disciples. One character in this novel uses an extending (*)** staff as a weapon and was trapped under a mountain for 500 years by the Buddha for eating peaches, which grant him immortality. This 100-chapter novel is thought to have been written by Wu Cheng'en. The monk Tang Sanzang is accompanied on his travels to India by the monkey king Sun Wukong in, for 10 points, what classic Chinese novel?
ANSWER: *Journey to the West* [or *Xi You Ji*, accept *Monkey*] <DB, Long Fiction>

15. **Catholic martyrs can undergo a "blood" form of this practice if they die before doing it. The theologian Huldrich Zwingli believed that this practice was symbolic, and therefore not necessary. This practice, which has alternative forms like aspersion and affusion, has controversially been performed on the dead by (*)** Mormons. Many sects of Christianity developed from believing that doing this practice on infants meant nothing, because the infants don't know if they believe in God, and are thus called "Ana-" this practice. For 10 points, name this admission rite of Christianity, which almost always involves water.
ANSWER: **baptism** [or Ana**baptist**s; accept word forms] <EA, Religion>

16. **Every movement of this composer's Violin Concerto starts with the triple-stop, two-octave-spanning "Passport" chord. In a ballet by this composer, the accents in the strings' harsh repeated staccato F-flat and E-flat seventh polychords are mimicked by the young girls stomping on stage. This composer portrayed the title character of another ballet using two simultaneous major triads a tritone apart. This composer of (*)** *Petrushka* began another ballet with a very high bassoon solo, and that ballet by this composer led to riots at its premiere. For 10 points, name this Russian composer of *The Rite of Spring*.
ANSWER: Igor **Stravinsky** [or Igor Fyodorovich **Stravinsky**] <AN, Auditory Fine Arts>

17. **When this war's winning side sent a message to the leader of a neighboring country asking for peace, that leader stated "the die has already been cast" and launched 6,000 shells at the winning side's capital. The *USS Liberty* was accidentally attacked during this war, spawning numerous conspiracy theories. This war began with the airstrike Operation Focus after the losing side closed the (*)** Straits of Tiran. The winning side in this war invaded and occupied the Golan Heights, the Sinai Peninsula and the West Bank. For 10 points, name this 1967 conflict between Israel and its Arab neighbors, that lasted less than one week.
ANSWER: **Six-Day** War [or the **June** War; or the **Third Arab-Israeli** War before "Israel" is read; prompt on Arab-Israeli War before "Israel" is read] <JL, World History>

18. **One of this poet's collections has a final section made up of "The Death of Lovers," "The Death of the Poor," and "The Death of Artists." "Folly, sin, error, avarice" are described as "occupy[ing] our minds" and "labor[ing] our bodies" in the beginning of one work by this poet. The title "prince of cloud and sky" of one poem by this man is mocked by the (*)** crew of a ship. The poem "To the Reader" opens a collection by this poet, which is dedicated to Theophile Gautier and contains "The Albatross." The first two sections of that collection by this poet are titled "Spleen and Ideal" and "Parisian Scenes." For 10 points, name this French symbolist poet of *The Flowers of Evil*.
ANSWER: Charles **Baudelaire** [or Charles-Pierre **Baudelaire**] <DB, Non-Epic Poetry>

19. **This body of water contains the Tyuleniy Archipelago and Ogurja Ada, its largest island. A lagoon that is thirty times saltier than this body of water is separated from its western portion and is called Garabogazköl. Atyrau and Aktau are located on this body of water, which is connected to Ceyhan by a pipeline. The Flame Towers are located in one city on this body of water, which is on the (*)** Absheron Peninsula. This body of water is bounded to the south by the Alborz Mountains in Iran. Baku is located on this body of water, whose oil production is led by Kazakhstan. For 10 points, name this "sea" in Central Asia that contains the mouth of the Volga River, the largest lake in the world.
ANSWER: **Caspian** Sea [Or Daryaye **Khezer**; or **Girkansk**; or **Kaspiskoye** More; or **Khazarsk**; or **Khvalynsk**]
<JG, Geography>

20. **The line integral of current times the differential of length all crossed with the displacement vector is the numerator in a line integral set equal to this quantity in one law. This quantity is the curl of the vector potential, and its partial is equal to the negative curl of electric field, per Faraday's law. Velocity is crossed with this quantity and multiplied by charge in the Lorentz force formula. (*)** Gauss' law states that the flux of this vector field through a surface is zero. The Biot-Savart and Ampere's laws are used to find the value of this vector quantity generated by a current. For 10 points, name this vector field symbolized B and often contrasted with the electric field.
ANSWER: **magnetic field** [or **B**-field] <DB, Physics>

Bonuses

1. The Treaty of Rhandeia dictated that this country would be ruled by a Parthian of the Arsacid dynasty, but only with the approval of the Roman emperor. For 10 points each:
[10] Name this Roman client kingdom, whose ruler Tiridates III converted it to a certain religion in 301.
ANSWER: Kingdom of **Armenia** [or **Armeniya**; or **Hayastan**; or **Hayastan**i Hanrepetut'yun]
[10] Under Tiridates III, Armenia became the first country to adopt this faith as its official religion. Sects of this religion include Orthodox and Catholicism.
ANSWER: **Christianity**
[10] Christianity was brought to Armenia by a patron saint of this name, known as "the Illuminator." A pope with this name is the namesake of a style of monophonic chant.
ANSWER: St. **Gregory** [accept St. **Gregory** the Illuminator or **Gregory** I or St. **Gregory** the Great] <JG, Ancient/Other History>

2. The opening of a film set during this conflict juxtaposes a ceiling fan with helicopters flying over a jungle as "The End" by the Doors plays in the background. For 10 points each:
[10] Name this war, during which Captain Willard is tasked with killing the insane Colonel Kurtz in the film *Apocalypse Now*. This war is also the setting of Stanley Kubrick's *Full Metal Jacket* and the movie *Platoon*.
ANSWER: **Vietnam** War
[10] This Italian-American director of *The Godfather* used an adaptation of *Heart of Darkness* for his film *Apocalypse Now*.
ANSWER: Francis Ford **Coppola**
[10] After arriving at Kurtz's Outpost, Willard meets an unnamed character played by Dennis Hopper, who has this profession. That character with this profession mirrors the Russian Harlequin from *Heart of Darkness*.
ANSWER: photo**journalist** [or **photographer**] <WG, Other Visual Fine Arts>

3. One author from this movement named Carolyn Cassady wrote the 1990 memoir *Off the Raod*, which is a reference to *On the Road*, another work by an author from this movement. For 10 points each:
[10] Name this hedonistic, 20th-century literary movement. Prominent members of this movement included Neal Cassady and Jack Kerouac.
ANSWER: **Beat** Generation [accept **beat**niks]
[10] This Beat poet is most famous for his long poem "Howl," which begins by describing how this poet "saw the best minds of [his] generation destroyed by madness."
ANSWER: Allen **Ginsberg** [or Irwin Allen **Ginsberg**]
[10] This other Beat writer went on a journey through South America for the telepathic drug yagé, which he described in *The Yage Letters*. He is more famous for his novel about William Lee, which is titled *Naked Lunch*.
ANSWER: William S. **Burroughs** [or William Seward **Burroughs** II] <EA, Non-Epic Poetry>

4. A supercritical phase of this molecule is a commonly used solvent in the field of green chemistry. For 10 points each:
[10] Identify this molecule, which is often used to decaffeinate coffee. Its critical point occurs at approximately 304 Kelvin and 73 atmospheres of pressure.
ANSWER: supercritical **carbon dioxide** [or **CO2**]
[10] Green chemists often use atom economy in place of this quantity as a measurement of the "greenness" of a reaction. This quantity is equal to the ratio of the weight of product synthesized to the theoretical weight of product synthesized.
ANSWER: chemical **yield**
[10] Green chemists don't like reactions generating products or side-products with this property of being able to damage organisms. This property of a substance is measured by the LD50.
ANSWER: **toxic**ity [accept **lethal**ity; accept **poison**ous] <GC, Chemistry>

5. Janet Cardiff's *The Forty Part Motet* art installation is a reworking of this composer's *Spem in Alium*, where the listener can travel around a circle of speakers playing one voice each. For 10 points each:
[10] Name this Tudor-era composer who, with William Byrd, secured a monopoly on printing music in England. Vaughan Williams wrote a Fantasia on this composer's tune "Why Fum'th in Fight?"
ANSWER: Thomas **Tallis** [accept *Fantasia on a Theme of Thomas **Tallis***]
[10] The remarkable feat in *Spem in Alium* is that the parts avoid accidentally using any frowned-upon parallel motion in this interval, the same distance as C up to G. A circle that organizes the 12 major key signatures is named for this musical interval.
ANSWER: parallel perfect **fifths** [accept Circle of **Fifths**]
[10] This later Norwegian composer of *Lyric Pieces* had no such problem with parallel fifths, as the technique is used constantly in the movement "Bell-Ringing." Open D-A fifths also open this composer's "Wedding Day at Troldhaugen."
ANSWER: Edvard **Grieg** [or Edvard Hagerup **Grieg**] <DD, Auditory Fine Arts>

6. In this play, Jean claims "Humanism is dead" and this play ends with the main character yelling "I'm not capitulating!" For 10 points each:
[10] Name this play, a parable about fascism, in which only a drunkard avoids being turned into one of the title animals.
ANSWER: ***Rhinoceros***
[10] This absurdist author of *Rhinoceros* also wrote of the Fire Chief interrupting the Martin's and Smith's dinner party in his play *The Bald Soprano*.
ANSWER: Eugene **Ionesco**
[10] Ionesco wrote in this language, which was also used by Jean Genet to write the absurdist plays *The Maids* and *The Balcony*. Moliere also wrote many plays in this language.
ANSWER: **French** [or **francaise**] <WG, Drama>

7. This thinker wrote about how he supported the separation of church and state in his *A Letter Concerning Toleration*. For 10 points each:
[10] Name this English philosopher, whose contributions to political theory include drafting the Constitutions of Carolina and writing *Two Treatises on Government*.
ANSWER: John **Locke**
[10] Locke believed that people are born without innate notions or ideas in his *Essay Concerning Human Understanding*. That idea is given this two-word Latin name.
ANSWER: **tabula rasa** [prompt on "blank slate" or "empty slate" or "clean slate"]
[10] Locke wrote that this concept is the result of man mixing his labor with nature. He partially inspired the ideas of the Declaration of Independence by saying that everyone has the right to "life, liberty," and this concept.
ANSWER: **property** [do NOT accept "the pursuit of happiness"] <EA, Philosophy>

8. Answer the following about Hull House, a settlement house that was a hub of social reform in the early 20th century, for 10 points each:
[10] This American reformer founded Hull House with Ellen Starr as a "community of university women," who would teach classes to working-class people. She was awarded the Nobel Peace Prize in 1931.
ANSWER: Jane **Addams**
[10] Hull House was located in this most populous Illinois city, where the Haymarket Square riot occurred after police killed two McCormick Harvesting workers striking for an eight-hour day.
ANSWER: **Chicago**
[10] Hull House was located in an ethnic neighborhood with this nickname centered on Taylor Street. Jacob Riis photographed several New York slums along Mulberry Street in an immigrant neighborhood with this nickname.
ANSWER: **Little Italy** [or **Piccola Italia**] <TB, American History>

9. In one task, this woman is instructed by a talking reed to collect some golden wool that is caught on briers. For 10 points each:
[10] Name this woman, who is assigned a series of seemingly impossible tasks after accidentally burning her husband, Cupid.
ANSWER: **Psyche**
[10] This mother of Cupid, who is the goddess of love, assigns Psyche her tasks.
ANSWER: **Venus** [or **Aphrodite**]
[10] In her first task, Psyche is assisted in sorting heaps of grain by some of these animals. In another myth, some of these animals were transformed into the Myrmidons.
ANSWER: **ant**s <WG, Mythology>

10. When a cold one of these regions overtakes a warm one, an "occluded" one forms, which can lead to cyclone formation. For 10 points each:
[10] Identify these boundaries that exist between air masses of different densities.
ANSWER: weather **front**s [or cold **front**s; or warm **front**s; or occluded **front**s]
[10] These violent weather events often occur along a cold front. In these events, anvil dome-shaped cumulonimbus clouds produce lightning and a namesake sound.
ANSWER: **thunderstorm**s [or **electrical storm**s; or **thundershower**s; prompt on lightning storms]
[10] A persistently rotating updraft called a mesocyclone defines one of these thunderstorms. These storms generate rear-flanking downdrafts that produce a characteristic "hook echo" on Doppler radar and sometimes form into tornadoes.
ANSWER: **supercell**s [prompt on rotating thunderstorms] <GC, Other Science>

11. This holiday celebrates Prahlada's survival after his father King Hiranyakashipu tried to burn him alive. For 10 points each:
[10] Name this Hindu holiday, which takes place on Phalguna Purnima, in which celebrants throw colored powders.
ANSWER: **Holi**
[10] In one story associated with Holi, this god took the form of his half-lion half-man avatar Narasimha to kill King Hiranyakashipu. This member of the *trimurti* is known as "the preserver."
ANSWER: **Vishnu**
[10] In one ritual performed on Holi, women drink this cannabis drink and beat men with sticks known as lathis.
ANSWER: **bhang** <WG, Religion>

12. A rebellion led by miners of this resource used the password "Vinegar Hill," and was sparked by the rejection of demands made by the Ballarat Reform League. For 10 points each:
[10] Name this valuable resource, the subject of a rebellion led by miners in the Eureka Stockade. This resource was the subject of "rushes," such as in Clunes and Bendigo, in the 1850s.
ANSWER: **gold** [accept **au**rum]
[10] The Eureka Stockade Rebellion took place in this country. In this country, Frank Gardiner robbed 2,400 ounces from the Lachlan Gold Escort in New South Wales.
ANSWER: Commonwealth of **Australia**
[10] During the Eureka Rebellion, one of these institutions run by James Bentley was burned. Paul Rusesabagina sheltered thousands of refugees from the *Interahamwe* militia in one of these institutions during the Rwandan Genocide.
ANSWER: **hotel**s <AN, World History>

13. In one of this man's plays, the title character steals Robert Zwelinzima's identity to obtain his work permit. For 10 points each:
[10] Name this playwright of *Sizwe Banzi is Dead*. The two characters Boesman and Lena wander amongst mudflats in another one of his plays.
ANSWER: Athol **Fugard**
[10] Athol Fugard is South African, as are the writers of *Woza Albert!,* a play about the arrival of this religious figure in South Africa. This man's death is dramatized in passion plays typically performed during Easter.
ANSWER: **Jesus** **Christ** [accept either underlined name]
[10] In this most famous Fugard play, Sam considers whether Jesus is a "man of magnitude." Sam and Hally reminisce about flying a kite in this play before Hally loses his temper and spits at Sam.
ANSWER: *Master Harold...and the Boys* <TB, Drama>

14. This province's town of Moose Factory is located south of James Bay, whose western shore is the site of Polar Bear Provincial Park. For 10 points each:
[10] Name this province that contains most of Lake of the Woods, which separates the Northwest Angle from Minnesota. Its coast also contains the cities of Oshawa, Thunder Bay, and Hamilton.
ANSWER: **Ontario**
[10] The Don and Humber rivers form an extensive ravine system and urban forest in this city, which is the center of the Golden Horseshoe region and is the capital of Ontario. This city is home to the CN Tower.
ANSWER: **Toronto**
[10] This island in Ontario lies north of the Bruce Peninsula and east of Georgian Bay in Lake Huron. It is the largest freshwater island in the world.
ANSWER: **Manitoulin** Island <JG, Geography>

15. NOTE TO MODERATOR: Please do not reveal alternate answers to the first part of the bonus, as that will spoil the second part. Thanks!
P53 can initiate this process if DNA damage is irreparable. For 10 points each:
[10] Identify this process characterized by membrane "blebbing." This process often occurs through a caspase cascade.
ANSWER: **apoptosis** [accept, but DO NOT OTHERWISE REVEAL, extrinsic **apoptosis**; accept, but DO NOT OTHERWISE REVEAL, intrinsic **apoptosis**; prompt on programmed cell death or PCD]
[10] This pathway of apoptosis is promoted by the binding of Fas ligand to Fas receptor or the binding of TNF-alpha to the TNF receptor. This pathway of apoptosis is triggered by the signals of outside cells.
ANSWER: the **extrinsic** pathway of apoptosis
[10] During the intrinsic pathway of apoptosis, cytochrome c exits from this organelle, forming the apoptosome. This organelle is the site of cellular respiration, which produces ATP.
ANSWER: **mitochondrion** [or **mitochondria**] <GC, Biology>

16. This story begins with Bailey reading the sports section as his mother pesters him about an escaped convict. For 10 points each:
[10] Name this short story. The Grandmother describes the Misfit as "one of my babies...one of my own children" before he shoots her three times at the end of this story.
ANSWER: "A **Good Man is Hard to Find**"
[10] "A Good Man Is Hard to Find" is by this Southern author, who wrote the short story collection *Everything That Rises Must Converge*.
ANSWER: Flannery **O'Connor** [or Mary Flannery **O'Connor**]
[10] In "A Good Man is Hard to Find," one of these events occurs after the cat Pitty Sing jumps up on Bailey's shoulder, leaving the Mother with a broken shoulder. June Star is disappointed that no one dies in this event.
ANSWER: a **car accident** [or **car crash**; accept clear equivalents] <TB, Short Fiction/Other>

17. *Memento mori*, or "reminder of death," is a common theme in art that uses skulls as a motif. For 10 points each:
[10] In this painting by Hans Holbein the Younger, an anamorphic skull is visible between the two title figures. This painting shows two political figures and a table filled with objects in front of a green curtain.
ANSWER: The **Ambassadors** [or The **French Ambassadors**]
[10] This artist painted *Skull of a Skeleton with Burning Cigarette*, in addition to more famous paintings like *Self-Portrait with Bandaged Ear* and *Starry Night*.
ANSWER: Vincent **van Gogh** [or Vincent Willem **van Gogh**]
[10] This artist's *For The Love of God* consists of a diamond-encrusted, platinum cast of a skull. This Young British Artist preserved a shark in formaldehyde in *The Physical Impossibility of Death in the Mind of Someone Living*.
ANSWER: Damien Steven **Hirst** <JG, Visual Fine Arts>

18. A rudimentary version of this structure was proposed in "Operation Mouse-Hole," and this structure was named one of the Seven Wonders of the Modern World by the American Society of Civil Engineers. For 10 points each:
[10] Name this structure, which runs underneath a namesake body of water near the Strait of Dover, creating the only permanent link between Great Britain and continental Europe.
ANSWER: **Channel Tunnel** [or **Chunnel**; or Le **tunnel** sur la **Manche**]
[10] This longest-serving president of France was in office for all of the Chunnel's construction. This Socialist, a rival of Charles de Gaulle, also approved many expensive "Grands Projets" for cultural monuments in Paris.
ANSWER: François **Mitterrand** [or François Maurice Adrien Marie **Mitterrand**]
[10] Migrants have often used the Chunnel to illegally enter the U.K., departing from refugee camps like this French city's namesake "Jungle." During the Hundred Years War, this city fell under English control until it was retaken in 1558.
ANSWER: **Calais** [or **Calais** Jungle] <TB, European/British History>

19. The magnitude of this force is equal to the weight of fluid displaced, according to Archimedes' principle. For 10 points each:
[10] Identify this force with direction opposite that of gravity that keeps objects afloat.
ANSWER: **buoyancy** [or the **buoyant** force]
[10] A gradient in buoyancy caused by gradients in temperature drives the "free" form of this process. This form of heat transfer is caused by the bulk movement of particles in a fluid.
ANSWER: **convection** [or free **convection**; accept **advection**]
[10] Free convection is contrasted with this form of convection driven by an external force, such as with a pump.
ANSWER: **forced** convection <GC, Physics>

20. Answer the following about notable altercations between NBA players and fans, for 10 points each.
[10] Probably the most famous fight between NBA players and fans is this 2004 brawl, in which Ron Artest entered the stands at a Michigan arena. Nine players were suspended as a result of this brawl with a rhyming nickname.
ANSWER: The **Malice** at the **Palace** [or **Pacers-Pistons** brawl with belligerents in either order; accept any reasonable synonym for "brawl," prompt on "Artest melee" or any answer combining Ron Artest's name with a fight]
[10] During the 2019 NBA Finals, Kyle Lowry was shoved by Mark Stevens, a part-owner of this team whose player roster includes Stephen Curry and Klay Thompson. Stevens was fined $500,000 for his actions.
ANSWER: **Golden State Warriors** [accept either underlined portion, prompt on "GSW"]
[10] Also in 2019, the Utah Jazz permanently banned one fan from their arena after he antagonized this player, a point guard for the Oklahoma City Thunder. This man was named 2017 NBA MVP after averaging a triple-double.
ANSWER: Russell **Westbrook** [or Russell **Westbrook** III] <TB, Trash/CE>