1. The name of the protagonist of this book is not mentioned until nearly the middle of book II; he is most often called either Tenente or darling. After escaping the battle police by jumping into the Tagliamento River, he and his love flee to Switzerland over the objections of their mutual friend Helen Ferguson. Over the course of five books and lots of drinking, Frederic Henry's love, Catherine Barkley, ultimately dies of hemorrhages after giving birth to their stillborn son. FTP name this semi-autobiographical novel by Ernest Hemingway.

Answer:
A Farewell to Arms
2. This first second-generation programming language featured structured control statements and was the first to include the block structure and recursion. Though never attaining the popularity of COBOL or FORTRAN due to its insufficient input-output facilities, this language is known today for its orthogonality and for its ubiquity in computer science documents as its version 60 was the standard for publication of algorithms. FTP name the programming language that acted as a progenitor for almost all modern languages.

Answer: ALGOL (accept Algorithmic Language)
3. Nicknamed "Little Ellick," this Whig was a staunch supporter of the annexation of Texas and the KansasNebraska act. The author of A Constitutional View of the Late War Between the States, he served in the House of Representatives and as governor of Georgia after the Civil War. FTP name the statesman whose titles included head of the southern delegation to the Hampton Roads conference and only Vice President of the Confederacy.

Answer: Alexander Hamilton Stephens
4. This sculpture held a statue of Nike in its right hand, while an alleged portrait of the sculptor adorning the shield on which its left hand rested resulted its his ostracism for impiety. Known today only through a Roman marble copy called the Varakion, this chryselephantine statue stood at a colossal twelve meters for around seven hundred years. FTP name the creation of Phidias that the Parthenon was built to house.

Answer: Athena Parthenos (prompt on "Maiden Athena" or equivalents)
5. This man's 15 -year-old mother named him for a city that would not surrender to Alexander the Great. Shortly after he left for training camp in 1905, she killed his father with a shotgun blast to the face. He won election to baseball's Hall of Fame in its first induction and received more votes than any other candidate from a list including Christy Mathewson and Babe Ruth; he had already won the American League batting championship 12 times, three times while hitting better than .400 . FTP name this man whose lifetime batting average of .366 has never been surpassed.

Answer: $\quad$ Tyrus Raymond Cobb
6. While on the faculty of the Harvard Medical School in 1933, this author of Gandhi's Truth on the Origins of Militant Nonviolence focused his research on the creative capacity of the ego in normal individuals. His studies of the Yurok with anthropologist Alfred Kroeber lead to his conclusion that solutions to similar problems arrived at by different cultures are generally different, though it is for another idea that he is more widely known. FTP name the psychoanalyst whose series of essays collected in Childhood and Society comprises an exposition of his theory of eight stages of human development.

Answer: Erik Homburger Erikson
7. This property was first verified and measured experimentally for electrons incident on nickel by Davisson and Germer in 1927 and has more recently been shown to be significant even in such complex molecules as $\mathrm{H}_{2}$ and $\mathrm{C}_{60}$. Its original formulation arose from the proposal that the circumference of a orbital in Bohr's hydrogen model ought equal an integer multiple of it and its formulation is precisely equivalent to the corresponding property in light. FTP name this property of a matter wave that is the ratio of Planck's constant to an object's linear momentum

Answer: de Broglie wavelength (prompt on "wavelength" or "lambda")
8. Ferdinand Foch foresaw a diversionary attack to capture Reims and draw French troops away from the Flanders front. After crossing the battle's namesake, German troops were able to advance ten kilometers under heavy fire before finding themselves trapped by a large force. A massive Allied counteroffensive at this salient forced the Germans to withdraw to the Aisne-Vesle line, ultimately foiling Erich Ludendorff's intended final offensive into Flanders. FTP identify the last major German offensive of World War One, fought on the same river where Joffre had defeated the Schlieffen Plan with a little help from the taxicabs of Paris.

Answer: Second Battle of the Marne (prompt on "Marne")
9. At the climax of this work the old man Dabney, who joined the League for reasons unknown and never utters a word, dies in the shootout at the irrigation ditch. After the Governor is crushed by the revelation of his bribery, the crooked lawyer S. Behrman takes possession of Los Muertos ranch and drowns in this novel's most ubiquitous symbol: wheat. Relevant subplots include the attempt of the poet Presley, whose metaphor for the Pacific and Southwestern forms the novel's title, to write the epic of the West and the eventual resolution of Vanamee's feelings for Angéle Varian. FTP name the book subtitled "A Story of California" that is the first in Frank Norris's unfinished Trilogy of the Wheat.

Answer:
The Octopus: A Story of California
10. Fittingly, this basis of the sunnah has a name with roughly the same meaning as "gospel." Its compilations include Al-Jami` as-Sahih and the Kitab as-Sunan. Religious scholars often consider its codification necessary to the perpetuation of Islam after the death of Muhammad, because of the strict Qur'anic precept that Allah communicates directly only with his Prophet. FTP name the traditional record of the sayings of Muhammad that has moral authority in Islam second only to that of the Qur'an itself.

## Answer: Hadith (accept Hadit)

11. This man's series has general term $(-1)^{n} /(1+2 n)$ [negative one to the $n$ divided by the quantity one plus two $n$ ] and converges to [pi over four]. Having perfected binary numeration, posited that all reasoning is reducible to an ordered combination of elements in De Arte Combinatoria, and created a calculating machine in 1673, he is considered one of the founders of computer science. A multidisciplinary scholar, he is also considered to have founded comparative historiography, classical dynamics, geology, and general topology; though it is for his co-foundation of another scientific field that he is best known. FTP name the German thinker who marred with its integration into his theory of monads his co-discovery of the calculus.

Answer: $\quad$ Gottfried Wilhelm Leibniz
12. He lived in Spain for two years, which inspired the overtures Jota Aragonesa and Night in Madrid. While many consider his incidental music to the play Prince Kholmsky to be his best symphonic work, the orchestral fantasia Kamarinskaya is more indicative of his legacy because in it he introduced folk song into instrumental composition. FTP name the composer of $A$ Life for the Tsar and Ruslan and Ludmilla, the first Russian nationalist composer.

Answer: Mikhail Glinka
13. T. S. Eliot was correct in calling this work "one of the stupidest and most uninspiring plays ever written," while the tradition of Ravenscroft states that it was actually only touched-up by its purported author. As it opens, the deceased emperor's two sons converge on the Senate with their followers and are placated by the main character's brother, Marcus. Though Alarbus is mostly forgotten, the removal of two heads, three hands, and a tongue prompt the murder of Demetrius and Chiron amongst lots of bloodshed at the behest of, FTP, which title character of the first play of William Shakespeare.

Answer:
Titus Andronicus
14. The Interim Agreement resulting from the first of these negotiations was an executive agreement and did not require Senate approval, though its other major result was ratified on August $3^{\text {rd }}$ and remained in effect until very recently. The second series produced a comprehensive treaty regarding their namesake and, though its ratification was derailed by the invasion of Afghanistan, the treaty was bilaterally put into effect de facto as both sides observed its provisions. FTP name the set of two discussions seeking to place limitations upon SLBMs, ICBMs, MIRVs, and ABMs that took place in 1972 and 1979.

## Answer: $\quad$ SALT (accept Strategic Arms Limitation Talks)

15. These molecules spontaneously assemble into spherical micelles and other ordered intermolecular structures when added to a polar solvent. Their linear bipolarity gives them the crucial property that they can also form a double layer in polar solvents, including water. FTP name the class of biological macromolecules that are fats with a phosphate group substituted for fatty acid at glycerol's third hydroxide, the building blocks of most biological membranes.

Answer:
phospholipids
16. This renowned marksman wielded a gun named "Bang-All" with which he shot cups of whiskey from the tops of his friends' heads for fun. A Pittsburgh native, noted roisterer, and feared fighter he was allegedly killed in an 1823 brawl over one of his many chers amis while a member of William Ashley's fur-trapping expedition. FTP name the man whom Davy Crockett described as "half horse and half alligator", the self-proclaimed king of the keelboatmen.

Answer: Mike Fink
17. Originally published with Lamia, Isabella, and other poems, this masterwork in forty-two Spenserian stanzas makes reference to one of its author's other familiar works as a song played to awaken a maiden "hoodwink'd with faery fancy." Hoping to influence his love's dreams of her future husband, a family rival is aided by Angela to hide in a closet and absconds with his beloved "o'er the southern moors." FTP name the 1820 work of John Keats in which an old Beadsman dies after Porphyro takes Madeline away from her home.

Answer:
The Eve of St. Agnes
18. This reaction requires a careful choice of base, though some form of alkoxide is almost always chosen, and it occurs by three sequential mechanisms: removal of an alpha-hydrogen, nucleophilic substitution, and spontaneous expulsion of an alkoxide. The end product is usually acidic and is a function of the source of the reactant resulting from the first step: use of a ketone yields of a beta -diketone, while the more common use of an ester yields a beta-ketoester. FTP name the reaction of an enolate with an ester that is an the intermolecular version of the Dieckmann cyclization and the ester analog of the aldol condensation.

Answer: Claisen condensation
19. This noted falconer was sent to Sumpu as an Imagawa hostage at age seven, though he was liberated and allowed to return home when the Imagawa daimyo was slain in battle by Oda Nobunaga in 1560. After becoming Oda's vassal and adopting many of his military and government reforms, this leader set about quelling frequent sohei uprisings and was thereby left in perfect position to become the main rival of Toyotomi Hideyoshi following Oda's assassination in 1582. FTP name the daimyo whose masterful victory at the battle of Sekigahara allowed him to found the shogunate named for him at Edo.

Answer: Tokugawa Ieyasu (accept Tokugawa Takehiyo or Ieyasu Tokugawa or Takehiyo Tokugawa - oh, what the hell, accept just plain ol' "Tokugawa")
20. The best-known song from this band's 1982 album is considered one of the most misheard songs of all time as many hear in its refrain "baby let's fuck." This lack of clarity is ironic for three reasons. One, though their lead singer was originally hired for his thuggish looks and access to sheet metal cutting equipment, he was actually briefly fired for being too understandable. Two, at the time of the release of 1982's It's Hard, they were on record as the loudest band ever. And three, in one of their early hits they specifically pleaded not to be misunderstood. FTP name the band that, in spite of the enduring popularity of such songs as Baba O'Riley, has never had a \#1 single in the UK.

Answer: The Who
21. Tacitus records that this historian attempted to introduce three new letters to the alphabet and called him "the very last man marked out for empire by public opinion" shortly after the death of his brother Germanicus. One of his wives stabbed herself to death in the gardens of Lucullus with assistance from a tribune, while a law barring the marriage of uncle to niece had to be repealed in order for him to marry another. FTP name the noted dice-enthusiast, husband of Messalina and Agrippina the Younger, and namesake of a dynasty who was thrust into the office of emperor by the praetorian guard after the assassination of Gaius in 41 CE.

Answer: $\quad$ Tiberius Claudius Caesar Augustus (accept Tiberius Claudius Nero Germanicus)
22. Though evidence exists indicating that this man made grand endeavors into geography, astronomy, and cosmology only a single sentence of this work, which describes the emergence of substances in metaphors drawn from human society, is extant. An arch-rationalist, he utilized the symmetry inherent in nature to conclude that there must exist an imperceptible, ubiquitous substance which he called the apeiron. FTP name the pre-Socratic philosopher and student of Thales who is held to have lived from 610 to 545 BCE.

Answer:
Anaximander of Miletus
23. This deity's vehicle is a white ort', and she is said to have emerged fully-grown from the churning of a milky sea seated on a lotus blossom. She is worshiped in modern times in the home each Friday, is revered by several sects of Jainism, and has had incarnations including Padma, Dharan i, and Sita. FTP name the Hindu goddess of wealth and good fortune who is the consort of Vishnu.

Answer: Laksmi (accept Lakshmi or Sri)
24. The right portion of this work is dominated by a gilded censer, while the child of the title characters, whose face is powerful study in sorrow and fear, is covered with a crimson sheet that presages his, ${ }_{\mathrm{m}}^{\mathrm{m}} \mathrm{m}$ inent death. Overcome with woe, the former title subject casts her teary eyes skyward while gesturing toward the latter; whose flawless body is crowned with laurels, covered with a red sheet, and reposing on a couch: his arms laid down forever at his head. FTP identify this work of arch-neoclassicism, a 1783 canvas of Jacques-Louis David.

Answer: $\quad$ Andromache Mourning Hector (accept La douleur d'Andromaque)

1. Identify the following things related to a certain quantity from chemistry FTPE.
2. This quantity of a chemical system for species $i$ is generally formulated as $\partial \mathrm{G} / \partial n_{i}$ [the partial derivative of system Gibbs free energy with respect to the amount of i] and symbolized [mu sub i].

Answer: chemical potential
2. Chemical diffusion currents can be understood as the action of this bulk generalization on a chemical species. It is expressed for species i as [the gradient of mu sub i].

Answer: chemical force
3. This quantity can be expressed as [the natural exponential of the ratio of mu sub i to k T ] and is a measure of the tendency of species i to vaporize.

Answer: fugacity
2. Name these degenerate modern short story writers FTPE.

1. This former smack addict is most famous for the short story collection Jesus ' Son.

Answer: Denis Johnson
2. This notable drunkard produced the collections Will You Please Be Quiet, Please? and What We Talk About When We Talk About Love before buying it in 1988.

Answer: Raymond Carver
3. This man, better known for such novels as Vineland, produced such short stories as "Entropy" and "The Secret Integration" before pulling a big disappearing act.

Answer: Thomas Pynchon
Identify these American upheavals FTPE.

1. This western Massachusetts tumult compelled the Massachusetts Supreme Court to adjourn but quickly fell apart when its force of about twelve hundred was repulsed in their attack on the Springfield arsenal and defeated at Petersham.

Answer: Shays's Rebellion
2. After winning the money to purchase his freedom in a lottery, this man was hanged on July $2^{\text {nd }}, 1822$ after his planned slave insurrection in Charleston, South Carolina; American history's largest; was thwarted due to informants.

Answer: Denmark Vesey
3. In 1842 Rhode Island had not drafted a constitution to replace the colonial charter of 1663 . Because this sharply limited the franchise, government opponents held an extralegal convention and drafted a new constitution. The governor declared martial law, which led to this unsuccessful attempt to seize the state armory.

Answer:
Dorr's Rebellion
4. Identify the composer of the following triplets of operatic works FTP.

1. Das Liebeserbot, Die Feen, and Lohengrin

Answer: Wilhelm Richard Wagner
2. Un giorno di regno, Les Vêpres siciliennes, Nabucodonosor

Answer: Giuseppe Verdi
3. Lucia di Lammermoor, L'elisir d'Amore, La fille du regiment

Answer: Giacomo Antonio Domenico Michele Secondo Maria Puccini
5. Identify each item culled from Buddha's grab-bag FTP.

1. Meaning "three jewels," Buddhists traditionally take refuge in this aggregate of three principles. It consists of Buddha, dharma, and sangha.

Answer: $\quad$ Ti-ratana (accept Triratna)
2. This first of Buddhism's central doctrines states that there exists no underlying, permanent substance; no soul; and is therefore a basal negation of the corresponding Hindu principle. With anicca and dukkha it constitutes the fundamental dharma.

Answer: anatta (accept anatman)
3. From the Sanskrit for "running around," this is the central underlying principle of both Buddhism and Hinduism. For Buddhists, it states that anatta is reborn in suffering so long as desire persists.

Answer:
samsara
6. Name the scientist from laws named for him for the stated number of points.

1. (5 points) Three laws of motion for a material point and the non-relativistic law of universal gravitation.

Answer: $\quad$ Sir Isaac Newton
2. (10 points) The law of friction between dry bodies and the non-relativistic law of the electrical force.

Answer: Charles-Augustin de Coulomb
3. (15 points) Three laws of motion for a finite body; a law relating the number of vertices, faces, and edges in a system; and the law of quadratic reciprocity.

Answer: Leonhard Euler
7. Answer these questions about a certain concept in philosophy FTP.

1. This term refers, in general, to the epistemology of Immanuel Kant and, in specific, to the belief that human consciousness, its ego, synthesizes knowledge by categorizing sensory information.

Answer: transcendental idealism (accept formalistic idealism; prompt on "transcendentalism" and equivalents.)
2. All transcendental idealistic philosophy is ultimately derived from this 1781 , in which investigation of the conditions required to perform synthetic deductions a priori suggests the transcendental deduction and therefore implies the existence of the transcendental ego.

Answer: $\quad$ Critique of Pure Reason (accept Kritik der reinen Vernunft)
3. This arch-transcendental work by Fichte performs an investigation along lines similar to those of the Critique of Pure Reason, but for the case of revealed religious truth.

## Answer:

## An Attempt at a Critique of All Revelation (accept Versuch einer Kritik aller Offenbarung)

8. Name these works of Euripides FTPE.
9. This play portrays the Greeks as cowards, reflecting the author's rage over the massacre at Melos. Astyanax is hurled from the walls of Troy, Andromache and Hecuba are enslaved, and Cassandra spouts insane prophesy due to her rape by Ajax.

Answer: $\quad$ The Trojan Women (accept Troades)
2. Heracles, who spends the bulk of this earliest extant Euripides play drunk, also bends its genre by rescuing the title character, who had been sacrificed in Admetus's place, from Hades.

Answer: $\quad$ Alcestis (accept Alkestis)
3. Though Alcestis possesses comedic elements, this only extant satyr play is the only true comedy by any of the three great tragedians. It tells of Odysseus's adventures in Sicily.

Answer: $\quad$ Cyclops (accept Kyklops)
9. Identify the following pieces of classic rock with a very titular female from lyrics describing her F5PE:

1. "She's about five feet four / From her head to the ground"

Answer: "Gloria"
2. "Jubilation, she loves me again"

Answer: "Cecilia"
3. "She would never say where she came from"

Answer: "Ruby Tuesday"
4. "Sea shell eyes / Windy smile"

Answer: "Julia"
5. "She's the raw flame / The live wire"

Answer: "Josie"
6. "Please see for me if her hair's hanging long / For that's the way I remember her best"

Answer: "Girl from the North Country"
10. [MODERATOR: Give team captain attached handout] Identify each algorithm from a quasi-Java implementation FTP. You have thirty seconds.

1. Answer: recursive binary search on an array (accept equivalents)
2. Answer: iterative linear search on a singly-linked list (accept equivalents)
3. Answer: recursive binary search on a binary tree (accept equivalents)

11 .Answer the following about a long series of wars and their resolution FTPE.

1. Historians generally acknowledge at least twelve major conflicts with this title; the first began in 1676 while the last ended in 1878. Their eventual result that their first namesake gained its desired territory while their second went into a steady state of decline.

Answer: Russo-Turkish Wars
2. While the treaties of Küçük Kaynarca and Jassy are far from forgotten, this March $3^{\text {rd }}, 1878$ pact is the best-known and last of the uneven endings to Russo-Turkish wars. By its original terms, Turkey was effectively compelled to relinquish control of the Balkans.

Answer: $\quad$ Treaty of San Stefano
3. The treaty of San Stefano was quickly supplanted as a result of this month-long diplomatic summit. By the terms of its conclusions, Russia was compelled to surrender much of its gains due to pressure from Great Britain and AustriaHungary.

Answer: $\quad$ Congress of Berlin
12. Identify the following works of $19^{\text {th }}$ Century Naturalism FTP from description or 5 points from its author. 1. (10 points) After working in a collar factory, the title heroine is seduced by Pete the bartender. After her family deserts her, she fails as a prostitute and kills herself.
(5 points) Stephen Crane
Answer: Maggie: A Girl of the Streets
2. (10 points) After working in a shoe factory, the title heroine is seduced by George Hurstwood. After she deserts him, he fails in business and kills himself.
(5 points) Theodore Dreiser
Answer: Sister Carrie
3. (10 points) Jeanne de Lamare, the only daughter of Norman gentry, leaves covenant school, gets married, and realizes after twenty-nine years that reality is unfortunate and disappointing sometimes.
(5 points) Guy de Maupassant
Answer: $\quad$ Une Vie (accept $\boldsymbol{A}$ Woman's Life)
13. Identify each of the fundamental items from special relativity FTP.

1. Generally symbolized [lower-case gamma], this is formulated as [the reciprocal of the square root of the difference of one and the square of the speed parameter]. An object's mass in an inertial reference frame is the product of this and its rest mass, while its length is the ratio of its rest length to this.

## Answer: Lorentz factor

2. This famous conundrum claims that special relativity allows there to exist asymmetric differences between inertial frames of reference as a results of transformations based on the Lorentz factor. Its argument is a fallacy, however, since, as the second object's velocity changes direction, there can exist no inertial frame between the two identical objects.

Answer: $\quad$ twin paradox (accept clock paradox)
3. This physicist concluded from the Lorentz transformations that the invariant interval between two relativistic events has properties similar to those of a Cartesian distance. He therefore argued that space and time should be thought of as comprising a single, four-dimensional continuum that is often called his universe.

Answer:
Hermann Minkowski
14. Name the following U.S. aircraft carriers FTP.

1. A former collier whose conversion was completed in March, 1922, this first United States aircraft carrier was modeled after the HMS Argus.

Answer: USS Langley
2. Designated CV-5, this carrier was abandoned as a result of attack by Type 97 shipboard attack aircraft from the Japanese carrier Hiryu on June $4^{\text {th }}, 1942$. Fortunately, its own scout bombers had already destroyed fleet carriers Kaga, Aakgi, and Soryu to decide the Battle of Midway.

Answer: USS Yorktown
3. A revolution was fomented with the launch of this first nuclear-powered aircraft carrier on September $24^{\text {th }}, 1960$. Answer:

USS Enterprise
15. Name the recent food items for the monkey that is your author's videogame addiction FTSNOP:

1. (5 points) Your author eagerly awaited this Firaxis title that is actually the sixth title in its series if the "Call to Power" series and the 'Net version of the original game are counted. It is, however, only the third directly written under the direction of Sid Meyer.

Answer: $\quad$ Sid Meyer's Civilization III
2. ( 10 points) This turn-based instant classic published by Strategy First has seen much more impressive sales than its prequel, which was largely overlooked. It allows to player to control the Human Empire, the Mountain Clans, the Undead Hordes, or the Legions of the Damned and is difficult enough to have caused your author to break several things in his room due to frustration.

## Answer: Disciples II: Dark Prophecy (prompt on "Disciples")

3. ( 15 points) In spite of the fact that an installation of it occupies only 25 megabytes, this innovative title is a strong contender for game of the year in the eyes of several gaming magazines and your author. The maiden work of Introversion Software, it is still somewhat buggy and has the player portraying a hacker certified by the namesake corporation.

## Answer: <br> Uplink

16. Identify these smooth works of Post-Impressionism FTP.
17. The ten Cézanne paintings with this title show its title feature, sometimes partially obscured by trees, in differing lights and levels of abstraction. Most feature an aqueduct at center-right.

Answer: Mont Sainte-Victorie
2. The subject of this van Gogh portrait reclines with his head resting on his right fist, his elbow resting on a table with foxglove. He wears a blue overcoat with green buttons and his eyes are set-off from the painting's overwhelming blue with their lambency and uniformity.

## Answer: $\quad$ Portrait of Dr. Gachet (accept Portrait du docteur Gachet)

3. Subtitled "Jacob Wrestling with the Angel," this Gauguin shows just that on a broad plane of red, behind a cluster of prayerful women and a tree.

Answer: $\quad$ Vision After the Sermon (accept Vision après le sermon)
17. Name these dynasties of China from the founder's real name FTP or from the approximate years of its mandate for five points.

1. (10 points) Chao Cheng
(5 points) 221-206 BCE
Answer: $\quad$ Ch'in Dynasty (accept Kin or Qin)
2. (10 points) Temüjin
(5 points) 1206-1368 CE
Answer: $\quad$ Yüan Dynasty (accept Yuan Dynasty or Mongol Dynasty)
3. (10 points) Nurhachi
(5 points) 1644-1911 CE
Answer: $\quad$ Ch'ing Dynasty (accept Qing Dynasty or Manchu Dynasty)
4. Answer these questions on Of Human Bondage FTPE.
5. 1915's Of Human Bondage is regarded as the greatest work of this English author.

## Answer: William Somerset Maugham

2. This club-footed orphan and perpetual grad student is the protagonist of Of Human Bondage. Eventually, he surrenders his pretensions, marries a "nice girl," and absconds to the country.

Answer: $\quad$ Philip Carey (accept either)
3. Philip carries on an obsessive and tragic affair with this waitress, whom he diagnoses with consumption; she crawls off, presumably to promptly die in a gutter somewhere.

Answer:
Mildred
19. Identify the following terms from developmental biology FTP.

1. This is defined as the variation in the relative rates of growth of various body parts. It explains why the proportions of a human infant are different from those of an adult.

Answer: $\quad$ allometricism (accept allometric growth or equivalents)
2. This is the retention of juvenile structures from evolutionary ancestors in the mature members of a species. The gills of the axolotl salamander are a prominent example.

Answer: paedomorphosis (accept paedomorphic expression or equivalents)
3. This is the fundamental alteration of an organism's bauplan, or basic body design. Mutations in Drosophila resulting in legs growing where wings normally go are an example.

Answer: homeosis (accept homeotic mutation or equivalents)
20. Identify the following concepts from primitive Roman mythology FTP.

1. Though later personified as a female deity and symbolized by a stork, this refers to the abiding sense of devotion to the gods appropriate to man.

Answer: Pietas
2. This group of amorphous and functional deities was somewhat analogous to the litany of Christian saints. Of its notable members, only Terminus substantially survived Rome's crossover to Hellenistic religion.

Answer: $\quad$ Nuimina (accept Numens or Numi)
3. These spirits were associated with men, especially in their procreative power. Those of great men, such as Octavian, were sometimes worshiped by cults.

Answer: Genii (accept Geniuses)
21. Identify the following geographical objects from features of an even less significant item with the same name FTP or for five points from other clues.

1. ( 10 points) This island of 1.2 square kilometers is in the northern Cooks, south of Pukapuka and north of Suwarrow. (5 points) A port city of the same name on the northeastern coast of New Providence serves as capital of the Bahamas.

Answer: Nassau
2. (10 points) This seat of its namesake county sits on both sides of the Yalobusha River and was formed in 1836 by the merger of Tullahoma and Pittsburg.
( 5 points) An island of the same name is also known as the Isle of Spice, is the southernmost of the Lesser Antilles, and has capital at St. George's.

Answer: Grenada
3. (10 points) Situated on the Montevideo-Paysandú highway, this wheat-processing center of south-central Uruguay is also known as Porongos.
( 5 points) Home to its nation's capital, Port of Spain, the island of this name is the largest in the southernmost of the Caribbean chain of republics.

Answer: Trinidad
22. Identify these poems about World War I from lines FTP.

1. "Take up our quarrel with the foe: $\backslash$ To you from failing hands we throw $\backslash$ The torch: be yours to hold it high."

Answer: "In Flanders Fields"
2. "Mute in the clamour of shells he watched them burst \Spouting dark earth and wire with gusts from hell, \ While posturing giants dissolved in drifts of smoke."

Answer: "Counter-Attack"
3. "What passing-bells for those who die as cattle? \-Only the monstrous anger of the guns."

## Answer: "Anthem for Doomed Youth"

23. Identify these things that any electrician knows FTP.
24. While cabling is generally graded by diameter, electrical wiring in the United States is conventionally rated on this scale.

Answer: AWG (accept American Wire Gauge)
2. This tool company manufactures durable wire cutters and tool bags but is best known for its namesake yellow-handled multi-tool, an electrician's best friend, that can both cut and strip wires of various gauges.

Answer: Klein Tools
3. This safety device is required in each 120 -volt circuit by Federal Construction Code. It is designed to break a leaking circuit by sensing current leaks with a differential transformer and most standard ones have "Test" and "Reset" buttons.

## HANDOUT FOR BONUS 10 - ILLINOIS B

1. // keySpace is sorted public static int algorithmOne(int[] keySpace, int key, int low, int high) \{
if (low > high)

$$
\text { return }-1
$$

else
\{
int mid $=($ low + high $) / 2$;
if (keySpace[mid] $==$ key) return mid; else if (key < keySpace[mid]) return algorithmOne(keySpace, key, low, mid - 1); else return algorithmOne(keySpace, key, mid +1 , high);
\}
\}
2. // node refers to a singly-linked list object public static node algorithmTwo(node keySpace, int key)
\{
if ( keySpace.value $($ ) $==$ key $)$
return keySpace;
else if (keySpace.next() != null)
return algorightTwo(keySpace.next(), key);
else
return null;
\}
3. // node refers to a sorted tree object public static node algorithmThree(node root, int key) \{

```
if(root.value()== key)
    return root;
else if(root.value() < key)
    if(root.leftChild() != null)
        return algorithmThree( root.leftChild(), key);
    else
        return null;
else
    if(root.rightChild() != null)
        return algorighmThree( root.rightChild(), key);
    else
        return null;
```

\}

