hsapq

1. **The lateral faces of a frustum are all this shape. This shape names a method which takes the product of the length of an interval and the average of the values of a function at the interval's endpoints; that is this shape's namesake "rule" for approximating integrals. This shape can be broken down into a rectangle and two right (*)** triangles. Its area is equal to the average length of its parallel bases times the height. For 10 points, name these quadrilaterals with a pair of parallel sides.
ANSWER: **trapezoid**s [prompt on **quadrilateral**s]

080-12-53-12102

2. **During this man's government, the auto company SEAT's success led to a so-called "economic miracle" in his country. In 1973, this man's prime minister was killed in a bombing carried out by the separatist group ETA. His fellow nationalist colleagues and rivals Emilio Mola and Jose Sanjurjo both died in mysterious plane crashes. This man designated (*)** Juan Carlos I as his successor after having taken power in a civil war. For 10 points, name this Spanish dictator from 1939 to 1975.
ANSWER: Francisco **Franco** y Bahamonde

052-12-53-12103

3. **in one of this man's paintings, a man gnaws at the front of the title vehicle, which holds a man in a red hood who is being held by a man wearing a laurel crown. In addition to *The Barque of Dante,* this artist painted a scene in which the title figure lays on his side in the top left as he is surrounded by women being slaughtered. He also created a painting in which a woman with (*)** bare breasts holds a flag over her head in one hand as she tries to lead the revolutionaries behind her. For 10 points, name this French artist of *The Death of Sardanapalus* (SAR-duh-NAW-puh-lis) and *Liberty Leading the People.*
ANSWER: Eugene **Delacroix** (deh-luh-KWA)

141-12-53-12104

4. **In this country, the use of *kipande* identification was protested by a political group founded by Harry Thuku. The exposure of the Goldenberg scandal revealed corruption in the government of this country's second president, Daniel arap Moi. Thousands of Kikuyu were killed in this country's Mau Mau Uprising. After gaining independence from the British in 1963, this country was led by Jomo (*)** Kenyatta. For 10 points, name this East African country whose cities include Mombasa and Nairobi.
ANSWER: Republic of **Kenya** [or Jamhuri ya **Kenya**]

014-12-53-12105

5. **To deal with these entities, "The Problem of Social Cost" advocates allowing interpersonal negotiation rather than governmental intervention, as formulated in Coase's Theorem. Pigouvian Taxes are meant to correct for these things. A beekeeper's bees pollinating nearby crops is an example of their (*)** "positive" variety, while pollution is an example of the "negative" variety. For 10 points, name these economic concepts, which occur when a transaction between several parties has an impact on people outside those parties.
ANSWER: **externalities** [or **spillover**]

080-12-53-12106

6. **The protagonist of this novel goes to church to see the minister's flirty wife, Lucy. One character in this novel sets the protagonist up with a part-time prostitute after he abandons his wife and son. The protagonist of this novel plays golf with Jack Eccles, who finds him work after he quits his job with MagiPeel. In this novel, the protagonist's second child drowns when his wife (*)** Janice drunkenly attempts to give the baby a bath. For 10 points, name this novel about Harry Angstrom written by John Updike, the first of the "Rabbit" series.
ANSWER: *Rabbit, Run*

7. **Growth hormones with a sequence similar to this have an axis that promotes cell proliferation. This hormone is secreted along with a cleaved C-peptide. Frederick Sanger was awarded the Nobel Prize for determining the structure of this protein. It is produced by the (*)** beta cells of the Islets of Langerhans, and it is the antagonist hormone to glucagon (GLOO-kah-gone). For 10 points, name this hormone that stimulates the uptake of glucose, used to treat diabetes patients.
ANSWER: insulin

8. **This man obtained a wife when a young woman offered to get ten thirsty camels water from a well. His name derives from the laughing sound his mother made upon hearing she would bear him. This husband of Rebecca was born to a mother beyond childbearing age; he is duped in his own (*)** blindness and old age out of granting an inheritance to the hairier of his twin sons. As a youth, he was taken to Mount Moriah by God's command. For 10 points, name this half-brother of Ishmael and father of Jacob who was nearly sacrificed by his father Abraham.
ANSWER: Isaac [or Yitzhak; or Ishaq]

9. **In one song, this man is "at the do'," (DOH-uh) while in another he claims that the listener is about to "witness the strength of street knowledge." In another song this man is "livin' in correctional facilities," because he was "expressin' with my full capabilities." This man sung most of "Express Yourself," in addition to recording, with (*)** Snoop Dogg, "Nuthin' But A G Thang" on the album *The Chronic*. This member of N.W.A. mentored Eminem and 50 Cent, and recently released the song "I Need a Doctor." For 10 points, name this rapper whose company now produces the Beats headphones.
ANSWER: Dr. Dre [or Andre Romelle Young]

10. **The protagonist of this novel goes to the National Museum to look at the backsides of the statues of Greek goddesses. In this novel, Martha Clifford sends a love letter to Henry Flower, a pseudonym of the protagonist. In this novel, Blazes Boylan is the adulterous lover of (*)** Molly, the main character's wife. This novel takes place on June 16, 1904, and it is organized into episodes ranging from "Telemachus" (teh-LEM-uh-kuss) to "Penelope." For 10 points, name this novel about a day in the life of Leopold Bloom, a work of James Joyce.
ANSWER: *Ulysses*

11. **The discovery of ore in Gabriel's Gully prompted a gold-rush along this country's Clutha River. The Hundalee Hills mark the northern extent of this country's Canterbury Plains. The Fox and Franz Joseph Glaciers in this country descend from its Southern Alps. Its tallest mountain is (*)** Aoraki, which comes from an indigenous word for "cloud piercer." This country is mainly centered on North and South Island, and its largest city is Auckland. For 10 points, name this island country, the home of the Maori, which is foudn to the east of Australia.
ANSWER: **New Zealand**

12. **This city was briefly ruled by a group called "The Four Hundred" after a 411 BCE coup. Hippias and Hipparchus replaced their father Peisistratus as leader of this city. Forces from this city supported the Ionian Revolt. It was controlled by the Thirty Tyrants beginning in 404 BCE. Historically led by Cleisthenes and (*)** Solon, this city's army was led by Miltiades when it beat a Persian invasion at Marathon. For 10 points, name this Greek city rival to Sparta and ruled democratically.
ANSWER: **Athens** [or **Athenai**]

13. **This artist sculpted a staggering nude man carrying a woman holding her knees to her chest in one group. In addition to *I am Beautiful*, this man created a sculpture of an upright nude man bending his right arm to clutch his head, which resulted in accusations that he cast it from a live Belgian soldier. This sculptor of *Age of Bronze* depicted Paolo and Francesca's love in *The (*) Kiss*,** which appears along with *Ugolini and his Sons* in a work partially inspired by Ghiberti's *Gates of Paradise*. For 10 points, name this French sculptor of *The Gates of Hell*, which contains *The Thinker*.
ANSWER: Francois-Auguste-Rene **Rodin**

14. **The standard electrode for electrochemistry involves the reduction of this substance. It is the lighter of two substances that are formed when carbon dioxide reacts with water. Its concentration is found in the numerator for K_a. Its concentration is often found using an ICE table. These substances, which are donated by (*)** Bronsted-Lowry acids, are equivalent to hydronium ions. For 10 points, name this substance whose presence is measured by pH.
ANSWER: **hydrogen ion** [or **H$^{\pm}$**; or **proton**; or **hydronium** ion before mentioned; do not prompt or accept "hydrogen" or "hydride"]

15. **During the Civil War, this state was the site of a battle in which the forces of John Chivington defeated Confederate forces under Charles Pyron at Glorieta Pass. It was in this state that Pat Garrett killed Billy the Kid. Project Y was established in this state under Leslie Groves, which led to this state being the site of the (*)** Trinity test. For 10 points, name this Southwestern state where J. Robert Oppenheimer worked in Los Alamos on the first atomic bomb.
ANSWER: **New Mexico**

16. **This deity was responsible for protecting Imsety, one of the four sons of Horus. In one story, this deity was beheaded by Horus before cutting off Horus' hands during a banquet. With help from Nepthys, this goddess recovered all the (*)** pieces of her husband except for one after that husband was cut into pieces by his brother. For 10 points, name this mother of Horus and wife of Osiris who was one of the most powerful goddesses in Egyptian mythology.
ANSWER: **Isis** [or **Aset**; or **Eset**]

17. **In one of this man's works, the protagonist can only achieve success with her tobacco shop by inventing a less virtuous cousin, Shui (SHWAY) Ta. This author employed the "distancing effect" in works like *The Good Woman of Setzuan,* which exemplifies his theory of "epic theater." This man also wrote the book and lyrics for a musical based on (*)** *The Beggar's Opera.* For 10 points, name this German playwright of *The Caucasian Chalk Circle* who collaborated with Kurt Weill on *The Threepenny Opera.*
ANSWER: Bertolt **Brecht** [or Eugen Berthold Friedrich **Brecht**]

18. **Joseph Joachim (YO-ah-kim) popularized this composer's Sonatas and Partitas for solo violin, which were composed at the same time as a set of six orchestral works including a G-major one that uses "echo flutes" and a B-flat major one with no violins. This composer wrote two books of preludes and (*)** fugues for keyboard in every major and minor key. One of his last completed choral works was the *Mass in B Minor.* For 10 points, name this composer of the *Brandenburg Concertos* and *The Well-Tempered Clavier.*
ANSWER: **J**ohann **S**ebastian **Bach** [prompt on **Bach**]

19. **One novel by this author was inspired by the murder of David Kammerer and depicts the author himself as Will Dennison. In addition to that work written with William S. Burroughs,** *And the Hippos Were Boiled in Their Tanks***, this author wrote a novel in which one character spends time on a cotton farm after meeting a Mexican girl on a bus. That character also spends time with Carlo (*)** Marx in Denver on his way to San Francisco. That novel by this man was originally typed on a single roll of teletype paper and is narrated by Sal Paradise. For 10 points, name this Beat Generation author of *On the Road.*
ANSWER: Jack **Kerouac** [or Jean-Louis Lebris de **Kerouac**]

20. **In orbital mechanics, the radial position of a body is proportional to the square of this quantity. If a system's Lagrangian is rotationally symmetric, Noether's theorem predicts the conservation of this quantity, which leads to Kepler's Second Law. Conserved in (*)** torque-free systems, this quantity is equal to the radius vector crosses with the velocity vector times mass. Equal to the moment of inertia times angular velocity is, for 10 points, what rotational analogue of momentum?
ANSWER: orbital **angular momentum** [do not accept or prompt on "momentum"]

21. **In one invasion of this island, Harold Alexander set Yellow Line and Blue Line targets during Operation Husky. Another invasion of this island was set back by the death of Lamachus and the recall of Alcibiades. A third invasion of this island started (*)** Giuseppe Garibaldi's campaign for Italian unification. For 10 points, name this Italian island on which a disastrous Athenian "expedition" failed to take Syracuse but on which George Patton's Seventh Army did take Messina and Palermo.
ANSWER: **Sicily** [or **Sicilia**]

22. **Organisms in this kingdom possess a growth structure called a Spitzenkorper (SPIT-zen-korp-er). Dutch elm disease is caused by the sac type of these organisms, which use asci to reproduce.** *S. Cerevisiae* **(seh-reh-VEE-say) is an example of the Ascomycota (ah-skoh-my-KOH-tah) type of these organisms. These organisms feed using the (*)** hyphae (HIGH-fae) on their mycelium (my-seh-LEE-um), and they possess chitinous (KIE-tuh-nuhs) cell walls. They form mycorrhizae (my-core-HIH-zay) in symbiosis with plants. For 10 points, name this kingdom that includes molds, yeasts, and mushrooms.
ANSWER: **fungi** [or **fungus**]

23. **In one poem, this man asserts, "many a peer of England brews livelier liquor than the Muse." One of his poems declares, "early though the laurel grows, it withers quicker than the rose." In another of his poems, a wise man says, "give crowns and pounds and guineas but not your heart away." This poet of "When I Was One-and-Twenty" and (*)** "Terence, This Is Stupid Stuff" also wrote a poem beginning, "The time you won your town the race, we chaired you through the market-place." For 10 points, name this British poet of "To an Athlete Dying Young."
ANSWER: Alfred Edward **Housman**

1. The crew of the first one of these missions was killed during a pre-launch test. For 10 points each:
[10] Name these space missions, the seventeenth of which was the last one to land men on the moon.
ANSWER: **Apollo** missions
[10] These lunar basaltic plains, contrasted with the highlands, are dark in color because of cooled lava, not because of the presence of water.
ANSWER: lunar **maria** [or **mare**; prompt on **sea**s]
[10] This scientist created three namesake laws to describe the rotation of the Moon. He also discovered a namesake division in Saturn's rings.
ANSWER: Gian Domenico **Cassini**

124-12-53-12201

2. Many of them were born when Ixion impregnated a cloud in his failed attempt to rape Hera. For 10 points each:
[10] Name these mythical creatures with the upper body of a man and the lower body of a horse.
ANSWER: **centaur**s
[10] Unlike others, this elderly centaur was regarded to be a son of the Titan Cronus. He served as a tutor to the healer-god Asclepius, as well as to the human heroes Jason and Achilles.
ANSWER: **Chiron**
[10] The centaurs fought the human Lapith tribe at one of these events. Eris disrupted another one of them.
ANSWER: **wedding** [or **marriage**]

104-12-53-12202

3. This property is the real portion of the impedance. For 10 points each:
[10] Name this property that, by Ohm's Law, equals voltage divided by current.
ANSWER: **resistance**
[10] For two resistors arranged in this kind of circuit, the equivalent resistance is equal to the sum of the resistances of each resistor.
ANSWER: **series** circuit
[10] An alternate formulation of Ohm's Law states that the coefficient of proportionality between current density and the electric field is this inverse of resistivity, denoted by a lowercase sigma.
ANSWER: **conductivity**

003-12-53-12203

4. The title character of this play interprets a thunderstorm as a sign from Zeus that he is about to die. For 10 points each:
[10] Name this chronologically last of the three "Theban plays," whose title character runs into Theseus at a village sacred to the Erinyes.
ANSWER: *Oedipus at Colonus* [or *Oedipus Coloneus*; or *Oidipous epi Kolono*]
[10] The three "Theban plays" were written by this Athenian tragedian, and include his most famous work, *Oedipus Rex.*
ANSWER: **Sophocles**
[10] At the end of *Oedipus Rex*, Oedipus inflicts this punishment upon himself upon finding that Jocasta is his mother.
ANSWER: he **blind**s himself [or obvious equivalents]

020-12-53-12204

5. This man was the Supreme Commander of Allied Forces during the invasion of Normandy. For 10 points each:
[10] Name this Republican President during the 1950s, who was elected under the slogan "I like Ike."
ANSWER: Dwight David **Eisenhower**
[10] Eisenhower promoted the creation of this system, partially due to his experience with the German Autobahn.
ANSWER: Interstate **Highway** System
[10] In his farewell address, Eisenhower warned of the "acquisition of unwarranted interest" by this faction, consisting of the army, its business interests, and the legislators that support it.
ANSWER: "**military-industrial** complex"

6. Name the following things about the Non-Aligned Movement, for 10 points each.
[10] One of its founders was Josip Tito, then the president of this no longer extant Balkan country that contained the lands of modern-day Croatia and Serbia.
ANSWER: Socialist Federal Republic of **Yugoslavia**
[10] One event preceding the formation of the Non-Aligned Movement was the Bandung Conference, a meeting in this country hosted by its leader, Sukarno.
ANSWER: Republic of **Indonesia**
[10] Sukarno was ousted from the presidency of Indonesia by this man, a general of his, who ruled Indonesia until 1998.
ANSWER: **Suharto**

7. In this novel, Professor Woland appears accompanied by Koroviev and the black cat Behemoth. For 10 points each:
[10] Name this novel, in which the Devil and his entourage wreak havoc in the atheistic city of Moscow.
ANSWER: *The **Master and Margarita***
[10] This Soviet author wrote *Heart of a Dog* in addition to writing *The Master and Margarita*.
ANSWER: Mikhail Afanasyevich **Bulgakov**
[10] In *The Master and Margarita,* the Master is writing a book about this character, the Roman governor who put Jesus to death.
ANSWER: Pontius **Pilate** [or Pontius **Pilatus**]

8. Its final movement depicts a "Festival in Baghdad." For 10 points each:
[10] Name this orchestral work in which a recurring violin solo represents a figure who tells the stories of Sinbad and the Kalendar Prince.
ANSWER: *Scheherazade*
[10] *Scheherazade* was written by this Russian composer, a member of the Mighty Five whose other works include *Capriccio Espagnol* and "Flight of the Bumblebee."
ANSWER: Nikolai Andreyevich **Rimsky-Korsakov**
[10] Another work by Rimsky-Korsakov depicts both pagan and Christian aspects of this holiday. That work features violin and flute cadenzas, as well as a trombone solo that imitates the chanting of a priest.
ANSWER: **Easter** [accept *Russian **Easter** Festival Overture* or *Russian **Easter** Overture*]

9. This work explains how the idea of a plane triangle entails the equality of its internal angles to two right angles. For 10 points each:
[10] Name this 1758 empiricst work that attempted to define the principles of human knowledge, and was a rewriting of Book One of the author's *A Treatise on Human Nature.*
ANSWER: An *Enquiry Concerning Human Understanding*
[10] *An Enquiry Concerning Human Understanding* was written by this Scottish philosopher, who attracted controversy for his atheism.
ANSWER: David **Hume**
[10] Hume was part of the Scottish Enlightenment along with this man, who wrote *The Theory of Moral Sentiments* and defended free trade in *The Wealth of Nations.*
ANSWER: Adam **Smith**

10. It is scheduled to be completed around 2026, about one hundred and forty years after construction began on it. For 10 points each:
[10] Name this Spanish basilica based on the Latin cross noted for its four bell towers finished between 1925 and 1930.
ANSWER: **Sagrada Familia** [or Temple of the **Sacred Family**; or Temple of the **Holy Family**]
[10] Sagrada Familia was the work of this architect, who who also created the Casa Mila, a building known for having floors structured like clusters of lily pads with steel-beam veins.
ANSWER: Antoni **Gaudi**
[10] Gaudi's Casa Mila and Sagrada Familia are located in this city that also includes Luis Domenechi Montaner's Music Palace.
ANSWER: **Barcelona**

11. This form developed from the opening of collaborative renga poetry. For 10 points each:
[10] Name this form of Japanese poetry that always contains a "season word." They are divided into three lines of five, seven, and five syllables.
ANSWER: **haiku** no renga
[10] One famous haiku describes one of these animals leaping into a pond. The last line translates to "the sound of water."
ANSWER: **frog**
[10] That haiku about a frog is among those by this author of the travelogue *The Narrow Road to the Deep North.*
ANSWER: Matsuo **Basho**

12. The background of this painting includes a house in Eldon, Iowa, and a geranium and a mother-in-law's tongue sitting on that house's porch. For 10 points each:
[10] Name this painting that has in its foreground a dour-looking couple dressed plainly, with the man holding a hayfork.
ANSWER: *American Gothic*
[10] This American Regionalist painted *American Gothic*, using his sister and dentist as models.
ANSWER: Grant **Wood**
[10] Grant Wood ridiculed a society with this painting, which shows three smug-looking, older women in front of a picture of *Washington Crossing the Delaware*.
ANSWER: *Daughters of Revolution* [or *Daughters of the Revolution*]

13. This woman came to power following the abdication of her husband, Peter III, who was then assassinated. For 10 points each:
[10] Name this Russian ruler who also put down Pugachev's Rebellion and expanded Russia's territory.
ANSWER: **Catherine the Great** [or **Catherine II** of Russia; or **Yekaterina Alekseyevna**; or **Yekaterina Velikaya**; or **Sophie Friederike Auguste**; prompt on **Catherine**]
[10] One method Catherine the Great used to gain territory was by taking part in the partitions of this country, which was wiped off the map for over a hundred years.
ANSWER: Republic of **Poland** [or Rzeczpospolita **Polska**]
[10] One of Catherine the Great's many lovers was this man, who apocryphally built whole fake villages to impress Catherine on a tour she took.
ANSWER: Grigory Aleksandrovich **Potemkin**

14. The community tries to take away this character's daughter, Pearl, but she is helped by the town minister. For 10 points each:
[10] Name this adulterous lover of Arthur Dimmesdale, who is forced to wear a red "A" as a badge of shame.
ANSWER: **Hester** Prynne [or Hester **Prynne**]
[10] Hester Prynne appears in the *The Scarlet Letter,* a work by this American novelist of "Dr. Heidegger's Experiment."
ANSWER: Nathaniel **Hawthorne**
[10] In this Hawthorne short story, the title character, Beatrice, has become poisonous due to her tending of her father's plants.
ANSWER: "**Rappaccini's Daughter**"

15. It began on June 22, 1941, as a three pronged assault and only ended a few miles from Moscow. For 10 points each:
[10] Name this German military operation of World War II that involved an invasion of the Soviet Union.
ANSWER: Operation **Barbarossa**
[10] Army Group South's objective in Barbarossa was achieved with the capture of Kiev, allowing the Germans to turn further east only to be surrounded and destroyed in this city. The battle in this city on the Volga was the turning point on the Eastern Front.
ANSWER: Battle of **Stalingrad**
[10] All throughout the war on the Eastern Front, this man was sent to whatever front seemed destined to fall apart. He had earlier fought the Japanese at the Battle of Khalkin Gol and captured Berlin in 1945.
ANSWER: Georgy Konstantinovich **Zhukov**

16. One part of this poem describes the "turbid ebb and flow of human misery" that was brought into the mind of Sophocles. For 10 points each:
[10] Name this poem that describes the "grating roar of pebbles" and begins, "The sea is calm tonight."
ANSWER: "**Dover Beach**"
[10] "Dover Beach" was written by this British poet whose criticism includes *Culture and Anarchy.*
ANSWER: Matthew **Arnold**
[10] Arnold's poem "Thyrsis" is an example of this type of poem. "Adonais" is an example of this type of poem written by Percy Bysshe Shelley.
ANSWER: pastoral **elegy**

17. This situation can arise when there is no substitute for a product available from other firms. For 10 points each:
[10] Name this economic structure in which there is only one supplier of a product in a market.
ANSWER: **monopoly**
[10] The opposite of a monopoly is this type of competition, in which many suppliers are selling the same product, and thus no one firm can influence the price.
ANSWER: **perfect** competition [or **pure** competition]
[10] In both a monopoly and perfect competition, profit is maximized by finding the point where marginal revenue equals this value, or where MR equals this.
ANSWER: **marginal cost** [or **MC**]

18. This theory uses the linear combination of atomic orbitals to compute its namesake structures. For 10 points each:
[10] Name this theory of molecular structure that involves bonding and anti-bonding varieties of its namesake structures.
ANSWER: **m**olecular **o**rbital theory
[10] This other theory of molecular structure predicts structures such as trigonal pyramidal, seesaw, and octahedral based on the number of bonding and lone pair electrons.
ANSWER: **V**alence **s**hell **e**lectron **p**air **r**epulsion theory [or **VSEPR** (VES-purr) theory]
[10] According to VSEPR theory, only atoms with this hybridization can have trigonal (TRIH-guh-nal) planar geometry. Examples of this include the carbons in ethane and the carbon in carbonate.
ANSWER: **sp2**

19. The Malmedy massacre occurred during this battle. For 10 points each:
[10] Name this battle that started in December 1944 in the Ardennes and was the last major German offensive in Western Europe during World War II.
ANSWER: Battle of the **Bulge**
[10] During the Battle of the Bulge, German forces surrounded this key city in Belgium. Upon receiving a note for surrender, the American commander of this city replied back "Nuts."
ANSWER: **Bastogne**
[10] Initial German attacks during the battle targeted units belonging to this U.S. General. Following the war, he became the first Chairman of the Joint Chiefs of Staff in 1949.
ANSWER: Omar Nelson **Bradley**

20. Most of these compounds are formed from simple sugars called monosaccharides (mah-noh-SACK-ih-rides). For 10 points each:
[10] Name these organic molecules that include cellulose and starches. They are composed only of carbon, hydrogen and oxygen.
ANSWER: **carbohydrate**
[10] This monosaccharide is a hexose sugar with a five-membered ring due to an oxygen atom linking the number-5 and number-2 carbons. Sucrose is composed of glucose and this sugar.
ANSWER: **fructose**
[10] The disaccharide maltose is composed of two molecules of glucose bound together in this type of bond, named for the carbon atoms joined.
ANSWER: **alpha 1,4** bond

21. An alternate version of this law states that stress is equal to Young's modulus times strain. For 10 points each:

[10] Name this law that is most often mathematically described as F equals negative k x and is often used to describe the restoring force in springs.

ANSWER: **Hooke**'s Law

[10] Integrating the restoring force over the displacement gives that this quantity for a spring is one-half times k times the square of the displacement.

ANSWER: **potential energy** [prompt on **energy**]

[10] Hooke's Law is only valid below this point on a stress-strain diagram, at which further deformation causes plastic instead of elastic deformation.

ANSWER: **yield** point [or **yield strength**; prompt on **elastic limit**; prompt on **proportionality limit**]