1. Resistance to it is present in many cases of polycystic ovary syndrome as well as in "Syndrome X". The radioimmunoassay for it was developed by Rosalyn Yalow, years after Frederick Sanger determined its primary structure. It is often taken subcutaneously using namesake "pens", and usually degrades 71 minutes after its release from beta cells. Activation of it results in glycogen absorption, and it thus opposes the effects of glucagon. For 10 points, name this hormone which is secreted in the pancreas and is disturbed by diabetes.
ANSWER: **insulin**

The Blackett effect predicts that they generate magnetic fields proportional to angular momentum. For 10 points each:
[10] Name these dense, faintly luminous stars which no longer undergo fusion, and are bounded in mass by the Chandrasekhar limit.
ANSWER: **white dwarf**s
[10] White dwarfs are located below the main sequence in the lower left portion of this doubly-eponymous diagram that shows a star's surface temperature and luminosity.
ANSWER: **Hertzsprung-Russell** diagram

2. This document was called for by William Patton and mentions Plaquemines, Lafourche, St Bernard, and other Louisiana Parishes as exceptions, as well as various counties in Virginia's tidewater region and the 48 counties making up West Virginia. It was an update of the "Second Confiscation Act" but did not apply to Border States and it was issued from a position of strength after the battle of Antietam. For 10 points, name this 1863 executive order in which Abraham Lincoln declared all slaves in Confederate territory free.
ANSWER: **Emancipation Proclamation**

He was placed in charge of armored forces during the 1961 Berlin Crisis, and served as Army Chief of Staff from 1972-1974. For 10 points each:
[10] Name this American general, the namesake of the M1 battle tank.
ANSWER: Creighton **Abrams**
[10] Creighton Abrams succeeded this man as commander of American military operations in the Vietnam War in 1968.
ANSWER: William **Westmoreland**

3. In one of his stories, the European guest of a caravan stops at an oasis and talks to an old dog-like animal. In addition to "Jackals and Arabs," he wrote about an ape that learned to act like a human and that gives the title "Report to an Academy." In one of his novels, a bank employee is arrested without reason and receives no answers, while in another novel, a man dies when his father throws an apple at him after turning into a "vermin." For 10 points, name this creator of Joseph K. and Gregor Samsa, the author of *The Trial* and *The Metamorphosis*.
ANSWER: Franz **Kafka**

The title character of this 1633 work murders his daughter with poisoned porridge. For 10 points each:
[10] Name this play in which Barabas is boiled alive in a caldron.
ANSWER: The ***Jew of Malta***
[10] *The Jew of Malta* was written by this English dramatist, who also wrote *Tamburlaine* and *The Tragical History of Doctor Faustus*.
ANSWER: Christopher **Marlowe**

4. This city's war against Sicyon was motivated by Epopeus's kidnapping of Antiope, daughter of Nycteus. One of its kings took Niobe as a wife; that king's twin brother, Zethus, named the city after his own wife. After one hero defended this city from Orkhomenos, he is awarded the king's daughter, Megara. It was founded by a man who sowed dragon teeth in the ground, Cadmus, and it was the site of the struggle between Polyneices and Eteocles. For 10 points, identify this city known for being ruled by men like Laius, Creon, and Oedipus.
ANSWER: **Thebes**

Zeus, in the form of a bull, abducted this daughter of the king of Sidon while she was gathering flowers. For 10 points each:
[10] Name this mythical figure who was brought to Crete by Zeus, and there bore him sons such as Rhadamanthys and Minos.
ANSWER: **Europa**
[10] This other son of Zeus and Europa shares his name with a King of Lycia who fought on the side of Troy before being killed by Patroclus.
ANSWER: **Sarpedon**

5. One type of this quantity can be calculated by measuring the effusion through a Knudson cell; that quantity puts the negative sign in the cavitation number. Enthalpy can be described as a function of entropy and this quantity. Fugacity has the same units as this quantity, while another unit used to measure it is equal to 101,000 Newtons per meter squared. For 10 points, identify this physical quantity whose conjugate variable is volume and which is measured in Torrs or Pascals.
ANSWER: **pressure** [accept **vapor pressure** until "Enthalpy"]

Although they are mostly found in prokaryotes, nematodes contain them. For 10 points each:
[10] Name this functional unit consisting of an operator, promoter, and some structural genes, which combined produces mRNA. A well known one is required for breaking down lactose.
ANSWER: **operon**
[10] Another operon promotes the formation of tryptophan, one of these twenty substances with an indole functional group. Cysteine and methionine are two of them which contain sulfur.
ANSWER: **amino acid**s

6. He edited four chapters of his students' interpretations of his work in *Man and His Symbols*. He described a phenomenon in which two causally unrelated events occur simultaneously and are attributed some deeper significance, known as synchronicity. The creator of the anima and animus archetypes, for 10 points, name this psychologist whose theories of introversion and extroversion in addition to a willingness to interpret dreams more concretely led to his break with Freud.
ANSWER: Carl **Jung**

This social scientist described totemism in Australia in his The *Elementary Forms of Religious Life*. For 10 points each:
[10] Name this Frenchman who also wrote *The Division of Labor in Society*.
ANSWER: Emile **Durkheim**
[10] This 1897 work by Durkheim is subtitled "A Study in Sociology," and posits four categories of the titular action, including "fatalistic" and "anomic."
ANSWER: ***Suicide***

7. Del Castagno's version juxtaposes one figure sitting rigidly with another in innocent slumber and employs halos, while Tintoretto's version takes a novel angle and includes a chandelier whose two flames give it angel wings. In the best-known version, one figure in blue sits with his elbow on a table and holds a small bag as he reaches for an incriminating piece of bread, and the central figure is the focus for all the painting's perspective lines. Famously depicted as a mural in Milan by Leonardo da Vinci, for 10 points, identify this common scene in which Jesus declares he will be betrayed.
ANSWER: ***The Last Supper***

He designed cardboard furniture called "Easy Edges," and many of his works feature a stainless steel facade. For 10 points each:
[10] Identify this architect of the Pritzker Pavilion and the Walt Disney Concert Hall.
ANSWER: Frank **Gehry**
[10] This city's Millennium Park is home to Frank Gehry's Pritzker Pavilion. This city's other attractions include Cloud Gate, which is commonly called The Bean, and the Sears Tower.
ANSWER: **Chicago**

8. The ultimate victors in it set up a temporary government in Burgos at its onset, and Andre Malraux's novel *Man's Hope* dealt with it. It resulted in the overthrow of Manuel Azana and Juan Negrin, and it escalated with infusion of forces from Morocco. This war saw the involvement of the Comintern-backed International Brigades, such as the Abraham Lincoln Brigade, and it saw the bombing of Guernica. For 10 points name this war in which the Nationalist regime of Francisco Franco took control of an Iberian country.
ANSWER: **Spanish Civil War**

Okhi Day is celebrated in this country, because its leader uttered a famous "No" to Mussolini's demands of annexation. For 10 points each:
[10] Name this nation whose Prime Minister from 1936 to 1941 was Ioannis Metaxas.
ANSWER: **Greece** [or **Hellenic Republic**]
[10] During the administration of Konstantinos Karamanlis, Greece saw a détente of sorts with Turkey over the issue of controlling this island in the Mediterranean with capital at Nicosia.
ANSWER: **Cyprus**

Arts
Current Events
Geography
History
Literature
Math Calculation
Philosophy
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9. This nation contains the Rakwana, Hatton and Knuckles highlands in addition to the Udawalawe, Wilpattu and Yala national parks. The Mahaweli is its longest river, while its highest peak lies near Nuwara Eliya, and is known as Pidurutalagala. Adam's Bridge separates the Gulf of Manar from the Palk Strait, which separates the Jaffna peninsula of this nation from the mainland. For 10 points, name this country whose largest cities include Trincomalee, Kotte and Colombo, an island nation off the southern coast of India formerly known as Ceylon.
ANSWER: **Sri Lanka** [prompt on "Ceylon"]

10. One character in this play asks "whether a madman be a gentleman or a yeoman" and suggests that another man take his coxcomb. One character feigns madness as Tom O'Bedlam, while his father has his eyes gouged out by the Duke of Cornwall. The Earl of Gloucester's illegitimate son Edmund usurps the rights of the legitimate Edgar and courts both Goneril and Reagan, the conniving daughters of the title character. For 10 points, name this Shakespeare tragedy that ends with the deaths of Cordelia and the titular king.
ANSWER: ***King Lear***

11. A follow-up to this conflict saw the Battle of Ramla and the death of Stephen of Blois, and it resulted in the creation of Outremer. Leaders of it, including Bohemond and Godfrey of Bouillon, feuded with Alexius I, who had called for it to help fight the Seljuks. It established the reign of Baldwin I, and was preceded by an action undertaken by Walter the Penniless and Peter the Hermit. For 10 points, name this conflict called by Urban II at the Council of Clermont, an attempt launched in 1095 to retake the Holy Land.
ANSWER: **First Crusade**

12. Moody diagrams are used to calculate a factor associated with this quantity that is used in the Darcy-Weisbach equation. This term also describes a quantity used in the Bagnold formula that is proportional to the Reynolds stress. It is proportional to velocity squared for fluids and Amonton's law states that the magnitude of this is proportional to the normal force. Existing in static and dynamic varieties, for 10 points, identify this force which acts in the opposite direction of motion.
ANSWER: **friction**

13. One site that was passed over for it is known as The Needles, and a technique used in it is "honeycombing". A nearby structure contains sixteen porcelain enamel panels as well as a titanium vault, two finishing touches in its Hall of Records. It saw the use of a protractor twelve times bigger than usual, and construction of it began with the drilling of six holes. The beard of one figure on the far right delayed its construction, and dynamite was used to grade contours of the figures' lips. For 10 points, name this Gutzon Borglum work, a South Dakota presidential monument.
ANSWER: **Mount Rushmore** National Memorial

14. One of his most prized possessions is a small flat-screen television, at least until his then-girlfriend breaks it with a cheap trophy. He notes that Lebron James and Kobe Bryant did not go to business school, and refers to coordination-challenged Stanley as his "secret weapon" before a game of basketball against the warehouse workers. Proudly displaying a "World's Best Boss" mug, for 10 points, name this clueless manager of the Scranton branch of Dunder Mifflin played by Steve Carell on *The Office*.
ANSWER: **Michael** **Scott** [accept either]

Arts
The bottom of the middle portion of this work features oversized fruit, and two black individuals with cherries on their head. When this triptych is closed, a painting depicting the third day of creation is revealed. For 15 points, name this work by Hieronymus Bosch.
ANSWER: The **_Garden of Earthly Delights_**

Current Events
The former holder of this position recently collapsed while giving a speech to the Federalist Society. For 15 points, identify this Cabinet position previously held by Michael Mukasey, and expected to officially be held soon by Eric Holder.
ANSWER: United States **Attorney General**

Geography
This country is a 33-island archipelago in the Persian Gulf, the largest island of which is connected by the King Fahd Causeway to Saudi Arabia. For 15 points, name this sheikdom with capital at Manama.
ANSWER: **Bahrain**

History
This man wanted money to "fructify in the pockets of the people", and he championed the failed Home Rule Bill. For 15 points, name this four-time Prime Minister, a man considered Benjamin Disraeli's rival.
ANSWER: William Ewart **Gladstone**

Literature
Settings in this work include Freeland and Interzone, and creatures called Mugwumps are found in this novel. Characters include Dr. Benway and the protagonist, Bill Lee. For 15 points, name this hallucinatory Beat novel by William S. Burroughs.
ANSWER: The **_Naked Lunch_**

Math Calculation
For 15 points, find the intersection point of the lines 3x+5y=25 and -1x+6y=7.
ANSWER: **(5,2)** [or **x=5, y=2**]

Philosophy
This philosopher proposed that all substance was made up of indivisible, windowless objects called monads and argued for the principle of sufficient reason. For 15 points, name this German polymath who claimed this is the "best of all possible worlds."
ANSWER: Gottfried Wilhelm **Leibniz**

Social Science

The Fischer equation relates the "real" form of these to the sum of the "nominal" form and expected inflation. For 15 points, identify these quantities whose examples include LIBOR and the "discount" version that is charged by the fed for commercial banks.

ANSWER: **interest rate**s

15. With Portevin, this man lends his name to a stress-strain relation for dilute alloys during deformation. With Mallard, he studied the combustion of methane after a series of coal mine disasters in France. His attempts to synthesize ammonia in the presence of iron failed due to contamination, not due to his namesake principle. For 10 points, name this French chemist who noted that if a system at equilibrium is perturbed, the equilibrium will shift in an attempt to restore the original conditions.
ANSWER: Henri Louis **Le Chatelier**

He was succeeded by his sickly son Edward VI whose mother Jane Seymour would be this man's third wife in a series of six. For 10 points each:
[10] Name this 16th century king of England.
ANSWER: **Henry VIII** [prompt on Henry]
[10] Henry VIII attempted to negotiate an alliance with this first French king and cultural reformer who would lose the Italian War to the Holy Roman Empire at the Battle of Pavia.
ANSWER: **Francis I** [prompt on Francis]
[10] Francis met Henry at this site in Calais in 1520 which took its name from the expensive cloth used in the tents.
ANSWER: **Field of the Cloth of Gold**

16. This man dissolved societies of anti-British Canadians operating from bases in the United States known as the Hunters Lodges. This man allied with Azariah Flagg and William Marcy in the Albany Regency, and his administration saw the Second Seminole War as well as the *Amistad* trial. This man led a coalition of former Whigs and Barnburners as the first Presidential candidate of the Free Soil Party, and he had earlier been defeated in his bid for re-election by William Henry Harrison. For 10 points, name this successor to Andrew Jackson as President.
ANSWER: Martin **van Buren**

One short story by this author features the deaths of both the title character and Pavel Ivanych on a ship that is traveling back from the Far East. For 10 points each:
[10] Name this author of "Gusev" in addition to a play in which Constantine Treplev shoots the titular bird.
ANSWER: Anton **Chekhov**
[10] In this play by Anton Chekhov, Madame Ranevskaya is forced to sell the titular piece of land to the merchant Lopakhin.
ANSWER: The **Cherry Orchard** [or **Vishniovy Sad**]
[10] The title character of this Chekhov play finds out that his brother-in-law is a fraud after managing his estate for years. He unsuccessfully tries to kill him.
ANSWER: **Uncle Vanya** [or **Dyadya Vanya**]

17. At one point in this novel, the narrator is jealous of Nunkie before escaping from a storm with her husband and a man named Motor Boat. Much of this novel takes place in Eatonville, where the narrator's second husband Jody Starks becomes mayor, and where the protagonist meets Pheoby Watson. Eventually the narrator is forced to shoot her third husband Tea Cake after he is bit by a rabid dog in the Everglades. For 10 points, name this novel in which Janie Crawford recounts her life, a work of Zora Neale Hurston.
ANSWER: *Their Eyes Were Watching God*

This work advances the idea of "wu wei," or action without effort. For 10 points each:
[10] Identify this text, said to have been written at the request of the keeper of the jade gate, which stresses the importance of harmony between man and nature.
ANSWER: the *Tao Te Ching* [or *The Way of Life*]
[10] The *Tao Te Ching* was written by this founder of Daoism, whose followers included Zhuangzi.
ANSWER: **Lao Tzu** [or **Laosi**; or **Lao Tse**; or **Laotze**; or **Lao Zi**]
[10] This other Chinese text consists of sixty-four hexagrams and was used in divination of the future. It is said to have been written down by Fu Xi.
ANSWER: *I Ching* [or *The Book of Changes*]

18. The drug decitadine is currently being tested as medicine for this condition. The first approved drug for the treatment of this condition was hydroxyurea, which has increased the median survival for sufferers of this condition to approximately 45 years. Persons afflicted with this condition have a higher survival rate in malaria-infested zones, although this condition often leads to small blood vessels becoming clogged, which results in vaso-occlusive crises. For 10 points, name this form of anemia that is characterized by crescent-shaped red blood cells.
ANSWER: **sickle-cell** anemia [or **sickle-cell** disease]

It features workmen exhorting each other to "Fill up the goblets!" as good wine causes "new strength and courage" to flow to the soul. For 10 points each:
[10] Name this famous piece of music from the opera *Il trovatore* in which the titular objects are struck while the loveliness of gypsy women is described.
ANSWER: "**Anvil Chorus**" [or "**Coro di zingari**"]
[10] *Il trovatore* is one of this man's operas, which also include *Falstaff* and *La Traviata*. ANSWER: Giuseppe **Verdi**
[10] Another well known Verdi piece is the canzone "La donna è mobile," which is sung by the Duke of Mantua in this opera.
ANSWER: *Rigoletto*

19. This conflict was inflamed by the Act of Accord, which disinherited Edward of Westminster. After seeing a vision of three suns, one participant was victorious at Mortimer's Cross, although that side later suffered defeat at the hands of Margaret of Anjou at the Battle of St Albans, leading to the recapturing of her husband Henry VI. For 10 points, name this conflict fought from 1455 until the Battle of Bosworth Field in 1485 between the English houses of Lancaster and York which used different colors of the namesake flower as their symbols.
ANSWER: **Wars of the Roses** [or **War of the Roses**]

A common example of this phenomenon is the splitting of white light into colors by a prism. For 10 points each:
[10] Name this phenomenon in which a wave bends upon moving from one medium to another medium in which its velocity changes.
ANSWER: **refraction**
[10] This law states that the ratio of the sines of the angles of incidence and refraction is equal to the ratio of the indices of refraction.
ANSWER: **Snell**'s Law [or **Snellius**'s Law; prompt on "law of refraction"]
[10] Snell's Law can be used to find this angle at which an unpolarized incident light ray must hit the surface so that its reflected ray is polarized.
ANSWER: **Brewster**'s Angle

20. One story tells how this figure got ditched by his fishing buddy Hymir, and another tells of him losing a wrestling match to Elli due to Skrymir's magic. This figure once got a whetstone stuck in his head after a battle with Hrungnir, and had to dress up as Freya to get his most prized possession back from Thrym. This figure, who resides in Bilskirnir, rides on a chariot pulled by two goats, whose names mean "gap-tooth" and "tooth grinder," and his wife's hair was once stolen by Loki. For 10 points, name this husband of Sif and owner of the hammer Mjollnir, the Norse storm god.
ANSWER: **Thor**

The title character of this novel is friends with Joseph Vaillant. For 10 points each:
[10] Name this novel in which Jean Letour builds a cathedral in New Mexico.
ANSWER: ***Death Comes for the Archbishop***
[10] This author of *Death Comes for the Archbishop* also wrote about Jim Burden's childhood fascination with a Bohemian girl in *My Antonia*.
ANSWER: Willa Sibert **Cather**
[10] This Willa Cather novel sees Frank Shebata kill his wife Maria and Emil Bergson. It ends shortly before the marriage of Alexandra Bergson and Carl Linstrum.
ANSWER: ***O Pioneers!***

21. His seventh symphony has two movements labeled "nachtmusik" that surround the third movement labeled "Schattenhaft." Another of his works includes a chorus of Holy Anchorites and the "Veni Creator Spiritus" hymn, while his sixth symphony's finale includes three hammer blows. He reused material from his song cycles *Des Knaben Winderhorn* and *Songs of a Wayfarer* in his symphonies, and he set Chinese poetry in his *Song of the Earth*. For 10 points, name this composer of the *Tragic*, *Titan*, and *Resurrection* symphonies, as well as the *Symphony of a Thousand*.
ANSWER: Gustav **Mahler**

They are a set of extensive properties that apply only to solutions. For 10 points each:
[10] Identify these properties, an example of which is vapor pressure depression.
ANSWER: **colligative** properties
[10] Higher concentration of some solute disrupts crystal formation, leading to this colligative property.
ANSWER: **freezing point** depression
[10] This quantity is equal to the van 't Hoff factor times the molarity times temperature times R. Since it is directly proportional to concentration, it is a colligative property.
ANSWER: **osmotic pressure**

22. One of this writer's poems discusses "black Misfortune's baleful train" and claims that "where ignorance is bliss, 'tis folly to be wise," while another cautions that "one false step is ne'er retrieved" and not "all, that glisters, [is] gold." In addition to "Ode on a Distant Prospect of Eton College" and "On a Favourite Cat, Drowned in a Tub of Gold Fishes" he wrote a poem that gives the title of Thomas Hardy's *Far From the Madding Crowd.* For 10 points, name this poet who wrote "the curfew tolls the knell of parting day" in "Elegy Written in a Country Churchyard."
ANSWER: Thomas **Gray**

This descendant of Sundiata debased the currency of Cairo by passing out massive amounts of gold while passing through in 1324. For 10 points each:
[10] Name this early-fourteenth-century ruler, who reigned from Niani and Timbuktu, and who was served by the general Sagmandia during his empire's capture of Gao.
ANSWER: Mansa **Musa** [or Kankan **Musa**]
[10] Mansa Musa was the ruler of this empire, which dominated West African trade from the thirteenth to fifteenth centuries, and shares its name with a modern French-speaking country.
ANSWER: **Mali** [or **Manding** Empire; or **Manden** Kurufa]
[10] During the disintegration of Mali power, this empire led by Sonni Ali and Askia Muhammad grew out of Gao, becoming the dominant polity of sixteenth century West Africa.
ANSWER: **Songhai** [or **Songhay**]