PRISON BOWL XII: DANIEL TOLD US NOT TO HAVE A SUBTITLE

PACKET EIGHT

TOSSUPS

1.
It's not temperature, but due to EIT, this value can be nearly 0 in Bose-Einstein condensate. The reciprocal of this value squared is equal to relative permeability times relative permittivity. By Snell's Law, the ratio of the sines of the angles of incidence and refraction is equal to the corresponding ratio of this value for the two media, and the index of (*) refraction is c over this quantity. Cherenkov radiation results when this value is passed, which cannot happen in a vacuum. For 10 points, name this value, the speed at which photons move in a material, which in a vacuum is defined as c.
ANSWER: phase **velocity** of **light** in a medium [accept **speed** for velocity; accept any mention of **electromagnet**ic waves or **photon**s instead of light (before mention); do not accept or prompt on "c" or "speed of light in a vacuum"; do not accept or prompt on "index of refraction"] <DM>

2.
An inverted-ninth chord was the basis for the third movement of one of this composer's works; that chord is the Farben chord, and it appears in "Summer Morning By a Lake." This composer's Opus 9 is a quartal harmonic one movement chamber work with 5 sections, Chamber Symphony No. 1. This composer of *Five Pieces for Orchestra* used a hybrid (*) speaking-singing technique in twenty-one songs in his *Gurre-Lieder*. For 10 points, name this Second Viennese School composer of *Pierrot Lunaire* who created the twelve-tone technique and pioneered atonality.
ANSWER: Arnold **Schoenberg** [or Arnold Franz Walter **Schönberg**] <BC>

3.
One character in this work is accused of wasting her life "playing at the one thing one did not play at." One character in this work asks himself "[if Shakespeare had never existed] would the world have differed much?" In this work, a character blowing out a candle after reading Virgil is described in sentences enclosed by (*) brackets. The deaths of Prue and Andrew are described in the second section of this novel, "Time Passes." For 10 points, name this novel by Virginia Woolf in which only Cam, James, Lily Briscoe, and Mr. Ramsay end up reaching the title location.
ANSWER: *To the Lighthouse* <AJ>

4.
Ignacio de Arteaga led an expedition to this region, and on the site of native barabaras, Three Saints Bay was the first European settlement in this region. This US region was the western terminus of a corridor through the Laurentide region; that corridor was thought to have allowed "overkill" and housed the ancestors of the (*) Clovis culture. A colonial conflict in this region saw the Tlingit ("KLINK-it") lose the Battle of Sitka. Found by Bering's expedition, for ten points, name this state bought by William Seward for the US, formerly controlled by the Russian-American Company, the northernmost state.
ANSWER: **Alaska** <DM>

5.

In a debate over Say's law, this person proposed rent being an economic surplus. The Club of Rome was part of this person's namesake "neo" school, as was a person who notably wagered with Julian Simon. This person distinguished between preventive and positive checks and posited that while population grows (*) geometrically, food supply will grow arithmetically, leading to his namesake catastrophe. For 10 points, name this British economist who, in *An Essay on the Principle of Population*, warned that excessive population growth could lead to famine.
ANSWER: Thomas Robert **Malthus** <BC>

6.

One of this figure's children was caught by a figure who used the head of an ox as bait. This figure burned a net while escaping a house with four doors and was once carried off after attacking an eagle with a skewer. This figure turned himself into a (*) mare in order to distract a mason's horse. Whenever Sigyn empties a bowl, the screams of this figure, who once lost an eating contest to fire, cause earthquakes. This figure appeared as an old woman to gain information that lead to the creation of a mistletoe arrow. For 10 points, name this Norse god of mischief who stole the golden apples of immortality.
ANSWER: **Loki** <AJ>

7.

This quantity for a lattice can be deduced from the Born-Haber cycle and can be derived in the Born-Landé equation. This quantity, which does not change in the Joule-Thomson Process, can be calculated using a calorimeter based on the equation q equals C-sub-v times the quantity T-sub-f minus T-sub-i. (*) Hess's Law states that this quantity in a reaction is equal to the difference of the sums of this value for the products and reactants. Equal to Gibbs free energy plus temperature times the change in entropy, for 10 points, name this quantity symbolized H, the total heat constant.
ANSWER: **enthalpy** [accept lattice **enthalpy** or **lattice energy** before "Joule-Thomson"; prompt on **H**] <AJ>

8.

In one work by this author, Emilia claims that the title character is the alter-ego of Ellian MacGregor, and Gregor finds a letter from 1603 written by that title character, Elina Makropulos. In another work by this author, the United States is crippled by a civil war over prohibition and China is influenced by the title (*) *absolute*. A novel by this man includes a section about the sex life of the title aquatic species; that novel is *War with the Newts*. A play by this man ends with Primus and Helena being called the new Adam and Eve by Alquist. For 10 points, name this Czech author who coined the term "robot" in his play *R.U.R.*
ANSWER: Karel **Čapek** ("CHAH-pek"; the first play is *The Makropulos Affair*; next is *The Absolute at Large*) <AJ>

9.

This man's band included the guitarist and drummer for the band Smile. His first partner Mary Austin was the inspiration behind the song "Love of My Life." This artist, with a 4 octave vocal range, performed the "Note Heard 'Round the World" during his band's set at (*) Live Aid in 1985. This musician is portrayed by Rami Malek in the 2018 biopic named for his band's biggest hit. For 10 points, name this musician behind such hits as "Don't Stop Me Now," "We Are the Champions," and "Bohemian Rhapsody," the lead singer of Queen.
ANSWER: Freddie **Mercury** [accept Farrokh **Bulsara** or **Larry Lurex**] <EL>

10.
A Byzantine emperor with this name was given the unflattering title "the Drunkard" by historians of the dynasty that succeeded him. One king of Romania with this name would lead a coup against dictatorial Prime Minister Ion Antonescu in 1944. A Russian ruler with this name who oversaw the conquest of (*) Siberia and shared power with his father Patriarch Philaret signed the Treaty of Stolbovo to end a war with Sweden. For 10 points, give the name of the Russian Tsar whose accession ended the Time of Troubles, the first Romanov Tsar of Russia.
ANSWER: **Michael** [accept **Michail**, **Mikhail** or **Mihai**] <MB>

11.
Guy Verhofstadt refused to allow this party to join the ALDE political alliance. This party was fined 50,000 euros for not protecting its members' information on the Rousseau website, where this party votes on major decisions despite Rousseau being privately owned. This party's ideology was described as (*) "Vaffanculo," or "up yours," by its founder, Beppe Grillo. After its coalition partner dissolved their alliance, this party allied with Matteo Renzi's Democratic Party. Matteo Salvini ended Lega's coalition with—for 10 points—what Italian populist political party?
ANSWER: **Five Star** Movement [accept Movimiento **Cinque Stelle** or **M5S**] <PO>

12.
This man's revenge for the Battle of San Juan de Ulúa occurred at Nombre de Dios. Later on a journey where he used gallows set up by a previous traveller at Puerto San Julián, this man captured *Nuestra Señora de la Concepción*. The mojito was invented during this man's victory at (*) Cartagena de Indias, which happened before he evacuated the original Roanoke colony. This explorer's flagship was renamed the *Golden Hind* after his successful piracy of the Pacific coast of Spanish America. For 10 points, name this English privateer who circumnavigated the world, a pirate knighted by Elizabeth I.
ANSWER: Sir Francis **Drake** <DM>

13.
In a story by this author, Jonathan is robbed after receiving an egg rasher for turning in rebel currency and later declares that "Nothing puzzles God." This author compared his home country's independence to the head of John the Baptist in his final work *There Was a Country*. Chief (*) Nanga is the title figure in this author's *A Man of the People*, and in another of his works Ekweli follows her daughter Ezinma on a visit to the Oracle. Ikemefuna is killed by a man whose gun accidentally goes off at a funeral in a novel by, for 10 points, this Nigerian author of *Arrow of God* and *Things Fall Apart*.
ANSWER: Chinua **Achebe** [accept Albert Chịnụalụmọgụ **Achebe**] <AJ>

14.
A dynamic set full of these objects is known as a radix tree. In Linux, "grep" is a command which can search these objects, and a command named for these objects can find and output them in binary sequences. In C++, these objects can be "null-terminated" using the character (*) 0x00 ("zero-x-zero-zero"). In Python, these objects are encoded by default using UTF-8 and have methods including "split," "len," and "lower." These objects can be concatenated and are outputted by the "print" function. For 10 points, name this data type which stores text.
ANSWER: **string**s [prompt on **text** files or equivalents] <AJ>

15.

This man calculated the sack of Troy to 1183 BC, inventing scientific chronology, and he also made the first accurate calculation of Earth's axial tilt. This man created the term "geography," also creating the discipline by mapping the known world onto latitude and longitude lines. Noting the lack of shadows at noon on the summer solstice at Syene and using a sundial in (*) Alexandria, this man was the first to accurately calculate Earth's circumference. For 10 points, name this Greek scientist, whose namesake "sieve" sorts out prime numbers.
ANSWER: **Eratosthenes** of Cyrene <DM>

16.

A shatner is someone who separates cloth fibers based on directions found in this book. This book takes place over the course of approximately a month immediately following the building of the tabernacle and also includes the story of Nadab and Abihu, who were killed for lighting a strange fire in the (*) temple. This book contains regulations on how to keep the temple and the self clean, including refraining from animals who do not have cloven hooves or chew their cud. For 10 points, name this third book of the Bible.
ANSWER: **Leviticus** [accept **Vayikra**, prompt on **Bible**, **Torah**, **Tanakh**, or **Pentateuch**] <AJ>

17.

Tyre reportedly had a colony in this country at Gadir, and Tartessos was located here. King Leovigild, a ruler in this modern country, tried to convert the population to Arian Christianity, which caused his son Hermenegild to revolt; he also conquered the Suebi and was a Visigoth. During the decline of the Nasrid dynasty in (*) Granada, the Alhambra was built in this country. After the Reconquista, Aragon and Castille were united into this country by Ferdinand II and Isabella I, who also established a namesake inquisition. For 10 points, name this country with capital Madrid.
ANSWER: Kingdom of **Spain** [accept Reino de **España**]<BKC>

18.

It's not amphibians, but due to their short cochleae, members of this class hear via electrical tuning. Members of this class, which includes gavials, are known to use gastroliths as digestive tools or ballast. A vestigial third eye is found in one subgroup of this class, tuataras. This class is categorized by a pair of (*) holes behind the eye, called the diapsid opening. Extinct members of this class include pterosaurs, plesiosaurs, and mosasaurs, and the Komodo dragon is a member of this class. For 10 points, name this class of cold blooded animals that include snakes, lizards, crocodiles, and birds.
ANSWER: **reptiles** [accept **Reptilia**, prompt on **birds** before "gavials"] <AJ>

19.

Two sisters in this work spend their time making red velvet roses, and their father is shoved into a radiator in one scene. Two friends in this work plot to steal a green bag containing an old woman's "inheritance," and this novel opens with Robert Smith (*) jumping off the roof of a hospital, causing a pregnant Ruth to enter labor. A character in this novel hangs the bones of her father in a bag from the ceiling and is shot and killed by Guitar; that character is the navel-less Pilate. For 10 points, name this novel focusing on Milkman Dead by Toni Morrison, titled after a book of the Bible.
ANSWER: *Song of Solomon* <RY>

20.
A fishing rod in this work may symbolize prostitution, and the cutting-edge zinc yellow in the middle of this work has browned over time. This work, which may be a mirror to *The Bathers at Asnières*, shows a man playing the trumpet next to two soldiers while a (*) rowing team sails past. In the center of this painting, a woman holding a red parasol walks with a little girl, and on its right side, a man and a woman with an umbrella stand rigidly in profile. For 10 points, name this painting by Georges Seurat depicting wealthy Parisians in a park on an island in the Seine.
ANSWER: *A **Sunday Afternoon** on the Island of the Grande Jatte* [accept *Un **dimanche après-midi** à l'Île de la Grande Jatte*; prompt on La/The **Grande Jatte**] <AJ>

TB.
A famous epistemological trilemma is named after a fictional German character with this title. This title roughly corresponds to *Freiherr* in the noble hierarchies of German-speaking nations. John Maynard Keynes and Nathan Rothschild both held this title. One person with this title formulated the idea of separation of powers and was (*) Montesquieu. Another man with this title, von Steuben, was of great aid in the American Revolution. Perhaps the most famous person with this title was a German fighter pilot known as the "Red" one of these. For 10 points, certain Gilded Age industrialists were pejoratively referred to as "robber" types of what noble title?
ANSWER: **Baron** <BL>

BONUSES

1.
Its borders were planned to stretch from Arkhangelsk to Astrakhan, in part following geopolitical theory of its time. For 10 points each,
[10] Name this nation which started World War II and planned a massive territorial expansion under Adolf Hitler.
ANSWER: **Nazi Germany** [Accept **Third Reich**, prompt on partial]
[10] Nazi plans for expansion were driven by this concept of Germanizing and settling in newly conquered lands, which literally means "living space."
ANSWER: **lebensraum**
[10] Lebensraum would have been necessary for Nazi Germany to reach this economic condition of isolation and self sufficiency, marked by a lack of trade.
ANSWER: **autarky** <BL>

2.
For 10 points each, name these things about some similarly titled literary works.
[10] This semi-autobiographical novel by Mario Vargas Llosa is named after a relative of the protagonist Mario and the Bolivian Pedro Camacho. Mario marries the title relative.
ANSWER: *Aunt Julia and the Scriptwriter*
[10] The play *Mother Courage and Her Children*, written by this German author, sees the title Anna Fierling caring for but eventually losing her children Katrin, Eilif, and Swiss Cheese during the Thirty Years' War.
ANSWER: Bertolt **Brecht**
[10] The comic strip *Mother Goose and Grimm* features a dog named Grimm and a goose as well as Attila, who is one of these animals. Another literary example of this animal is the Cheshire one.
ANSWER: **cat** <RY>

3.
Russia has a lot of enemies. Answer some questions about one of them, for 10 points each:
[10] This former FSB officer and Russian defector wrote the book "Blowing Up Russia: Terror from Within" and coined the term "mafia state." He was poisoned and died in London in 2006.
ANSWER: Alexander Valterovich **Litvinenko**
[10] While Litvinenko was in the hospital, he claimed that this man was the cause of his illness. This man is the current President of Russia.
ANSWER: Vladimir Vladimirovich **Putin**
[10] Litvinenko was found to have been poisoned by the 210 isotope of this element. This highly rare radioactive element was discovered by Marie and Pierre Curie and is named for Marie's home country.
ANSWER: **polonium** [accept **Po**] <EL>

4.

An outbreak of this disease in the Democratic Republic of the Congo followed a famous outbreak in West Africa in 2014. For 10 points each:

[10] Name this filovirus which causes hemorrhagic fever and can have a fatality rate of 90%. A nonvirulent type of this virus is named for Reston, Virginia.

ANSWER: **Ebola** virus

[10] Another species of filovirus is a virus named after this town in Germany, where it was first discovered when researchers were infected from green monkeys. This town was also the site of a "colloquy" ("CALL-uh-quee") between Ulrich Zwingli and Martin Luther.

ANSWER: **Marburg**

[10] A likely natural reservoir for Ebola Viruses and Marburg Viruses are these mammals of order Chiroptera.

ANSWER: fruit **bats** <DM>

5.

This artist depicted a man building a wooden wheel in one work. For 10 points each:

[10] Name this artist who depicted a red mountain in *South Wind, Clear Sky* and a landscape containing several free-standing gates.

ANSWER: **Katsushika** **Hokusai** [accept either name, or both in either order]

[10] Three boats are nearly destroyed by the title phenomenon in this Hokusai work, which bears an inscription revealing that its creator has just assumed the name Iitsu.

ANSWER: *The **Great Wave** off Kanagawa* [accept ***Kanagawa-oki nami ura***; prompt on "*The Wave*"]

[10] *The Great Wave* was printed by stamping paper with blocks made of this material. This material is also used to construct puzzle boxes.

ANSWER: **wood** <AJ>

6.

Heads or tails? For 10 points each, name some things about coin flips in literature.

[10] In this author's short story "The Machine that Won the War," Lamar Swift reveals that he never trusted the title computer's output to make difficult decisions, relying instead on coin flips.

ANSWER: Isaac **Asimov**

[10] In this Cormac McCarthy novel, hitman Anton Chigurh ("shi-GER") uses coin flips to determine whether he kills people, such as a gas station cashier and Carla Jean. This novel gets its title from a William B. Yeats ["YATES"] poem.

ANSWER: *No Country for Old Men*

[10] This title character wins 92 consecutive coin flips by calling heads every time at the beginning of the Tom Stoppard play in which he appears, causing this man's companion Guildenstern ("GILL-den-stern") to say, "A weaker man might be moved to re-examine his faith, if in nothing else at least in the law of probability."

ANSWER: **Rosencrantz** [do not accept "Rosencrantz and Guildenstern are Dead"] <RY>

7.
For ten points each, answer some questions pertaining to operas by Mozart.
[10] This opera inspired by Greek mythology is about Ilia, the daughter of defeated Trojan King Priam. Ilia is kept as a prisoner on Crete and falls in love with Idamante, who is the son of the title character.
ANSWER: *Idomeneo, re di Creta ossia Ilia e Idamente*
[10] This later Mozart opera details the adventures of Tamino and Papageno as they rescue Pamina from Sarastro. In this opera, Sarastro claims that he kidnapped Pamina as she and Tamino belong together.
ANSWER: *The Magic Flute* [accept *Die Zauberflöte*]
[10] This royal character from *The Magic Flute* performs a rage aria famous for its large range, which reaches up to F6. That aria is "Der Hölle Rache kocht in meinem Herzen," but is often referred to as this character's aria.
ANSWER: **Queen of the Night** <EL>

8.
This group attacked the Ethiopian army in Jigjiga and held its headquarters at Buuhoodle. For 10 points each:
[10] Name this group, who founded a namesake state under Mohammed Abdullah Hassan, often called the "Mad Mullah."
ANSWER: **Darwish** movement/state [accept **Dervish** movement/state, accept **Halgankii Daraawiishta**]
[10] The Darwish movement was one of the first states in this country on the horn of Africa, which has been in a state of complete chaos since Siad Barre was overthrown in 1991 in Mogadishu.
ANSWER: **Somalia**
[10] The Darwish movement was defeated in 1920 by this country's Somaliland Campaign. Along with Italy, this country then ruled part of modern Somalia until 1960.
ANSWER: **U**nited **K**ingdom of Great Britain and Northern Ireland [accept **Britain** or **England**] <CO>

9.
Moderator Note: Do NOT reveal potential prompts to the first part.
Molecular clouds are often these places. For 10 points each:
[10] Name these places that form certain astronomical bodies through cloud collapse. The "Pillars of Creation" are one example of them.
ANSWER: **stellar nursery** [prompt on **nursery** or **nebula**e]
[10] Stellar nurseries are examples of these objects, clouds of gas in space. The Eagle one of them contains the Pillars of Creation.
ANSWER: **nebula**e
[10] This adjective describes molecular clouds between 1000 and 10,000,000 solar masses. One group of stars is located in the "asymptotic [this adjective] branch."
ANSWER: **giant** <DM>

10.
For 10 points each, name some things about the 2018 FIFA World Cup.
[10] This team won the World Cup after defeating Croatia 4-2 in the final. Players on this team include Antoine Griezmann, Olivier Giroud, and captain Hugo Lloris.
ANSWER: **France**
[10] The 2018 World Cup saw the introduction of this system to review calls where officials look at a replay during the game to make decisions. The 2018 World Cup was the first major soccer tournament to fully use this system.
ANSWER: **VAR** [accept **video assistant referee**; prompt on anything mentioning **video review** or the like and ask for the specific term]
[10] In the group stage, France and this team had the dubious honour of playing the only 0-0 draw in the whole tournament. This team was later eliminated by Croatia on penalties in the round of 16.
ANSWER: **Denmark** <BC>

11.
Answer some questions about the career of Maryse Condé, the winner of the New Academy Prize in Literature, the 2018 replacement for the Nobel, for 10 points each:
[10] Condé wrote a book about this character who is thrown into a jail cell with Hester Prynne. This real-life figure was the first person to be accused at the Salem Witch Trials.
ANSWER: **Tituba** [accept *I, **Tituba**, Black Witch of Salem* or *Moi, **Tituba**, Sorcière… Noire de Salem*]
[10] Another of Condé's works, set in Guadeloupe, is a reworking of this Emily Brontë novel in which Heathcliff and Lockwood visit Thrushcross Grange.
ANSWER: ***Wuthering Heights**
[10] Condé also wrote a biography of a person with this relationship to her, *Victoire.*
ANSWER: maternal **grandmother** <AJ>

12.
Moderator Note: Emphasize "greater" in the first part
It's World War II, and the Manhattan Project needs your help in building an atomic bomb. For 10 points each:
[10] You must collect this much fissile material such that the effective neutron emission factor is greater than one. With this quantity of fissile material, the number of fission reactions will increase exponentially.
ANSWER: **supercritical mass** [do not accept or prompt on "critical mass"]
[10] Next, you must enrich this element by separating out its fissile 235 isotope from its more common, non-fissile 238 isotope. This element is the heaviest naturally occurring element and has symbol U.
ANSWER: **uranium**
[10] You've made your bomb and have lots of uranium-238 left over. It will undergo this kind of decay to become thorium-234.
ANSWER: **alpha** decay <BC>

13.
For 10 points each, name the following about Tule ("TOO-lee") Lake.
[10] Tule Lake is at the northern end of this state, north of its Central Valley, which contains Sacramento.
ANSWER: **California**
[10] Tule Lake was critical in the territory of this Native American tribe, which was destroyed in a namesake 1872-73 war under the leadership of Captain Jack.
ANSWER: **Modoc**
[10] Tule Lake was also one of the residential sites in this governmental program, ordered by Executive Order 9066, which also took place at other sites throughout the West such as Manzanar.
ANSWER: **Japanese internment** [accept reasonable equivalents, prompt on partial answer] <DM>

14.

Despite beginning with a C-sharp major chord below two C sharps, this work is in C-sharp minor. For 10 points each:

[10] Name this work; the second of a set of 19. The lassan and the friska are this work's two sections and it finishes with a series of prestissimo octaves.

ANSWER: **Hungarian Rhapsody No. 2** in C-sharp minor [accept **S. 244/2**; prompt on **Hungarian Rhapsodies**]

[10] Hungarian Rhapsody No. 2 was composed by this Hungarian composer who also wrote "La campanella," one of his six "Grandes études de Paganini".

ANSWER: Franz **Liszt**

[10] Liszt also wrote this set of four pieces of which the first is "The Dance in the Village Inn." The first two were intended for orchestra while the last one was only published in 1955.

ANSWER: **Mephisto Waltzes** <BC>

15.

Seize the means of production! For 10 points each:

[10] Name this philosophy which advocates for the workers' self-management. This philosophy argues that private property can be individually owned, but industrial property must be public.

ANSWER: **socialism** [do not accept "communism"]

[10] This socialist "celebrity philosopher" combined the ideas of Marx, Hegel ("HAY-gull"), and Lacan for his first English text, *The Sublime Object of Ideology*. He once famously wrote a philosophical article inside an Abercrombie & Fitch catalog.

ANSWR: Slavoj **Žižek** ("SLAV-oy ZHEE-zheck")

[10] Žižek has appeared as the host of two documentary films titled [This Person]'s *Guide to Ideology* and [This Person]'s *Guide to Cinema*. More generally, this person is someone whose personal proclivities differ from those of society as a whole.

ANSWER: **pervert** <AJ>

16.

The Weyl type of this class of particle was predicted by solving the Dirac equation. For 10 points each,

[10] Protons and neutrons are the composite type of this class of particle since they are made up of an odd number of smaller versions of these particles. Quarks are a type of this class of particle.

ANSWER: **fermion**s

[10] This principle states that two identical fermions cannot occupy the same quantum state at the same time. Bosons are not subject to this principle since they have integer spin.

ANSWER: **Pauli exclusion** principle

[10] If two of these leptons are in the same orbital, they must have opposite values of spin according to the Pauli exclusion principle. One of these particles makes up a hydrogen atom along with a proton.

ANSWER: **electron** <BC>

17.

A hermaphrodite in this play is said to be the reincarnation of Pythagoras. For 10 points each:

[10] Name this comedy in which the title character pretends to be dying to entice three men, including Corbaccio, to give him gifts.

ANSWER: *Volpone*

[10] Volpone is aided by this cunning servant of his, who defends him from Bonario and Celia before attempting to unsuccessfully abscond with his wealth.

ANSWER: **Mosca** [accept The **Fly**]

[10] The author of *Volpone* is this Jacobian playwright whose other works include *Every Man in His Humour*, *The Alchemist*, and *Bartholomew Fair*.

ANSWER: Ben **Jonson** [accept Benjamin **Jonson**] <BC>

18.

Time for some agricultural history, but the bad parts. For 10 points each:

[10] Following the eruption of Mount Tambora, global temperatures dropped by an average of 0.7 Celsius, leading to the last widespread famine of Europe. The year 1816 was thus given this name.

ANSWER: **Year Without a Summer** [accept **Poverty Year** or **1800 and Froze to Death**]

[10] This famine resulted from blight destroying a type of tuber, the staple crop of a European island country. People fleeing it came to the US in large numbers.

ANSWER: **Irish Potato Famine** [accept partial answer; accept **Great Famine** or **Great Hunger**]

[10] A famine in this region of northeastern British India occurred during 1943 in World War II, worsened by wartime policies.

ANSWER: **Bengal** <DM>

19.

One of these figures is named Deino, or "dread." For 10 points each:

[10] These sisters are the only ones that know the locations of the Gorgons. These sisters share one eye and one tooth between them.

ANSWER: **Graeae** ("GRY-ee") [accept **Grey Sisters** or **Deino**, **Eyno**, and **Pempherendo**; prompt if not given all of their names]

[10] The Graeae had their eye stolen by this hero, who slew Medusa and rescued Andromeda from a sea monster.

ANSWER: **Perseus**

[10] Perseus stole some apples guarded by the daughters of this Titan. Another daughter of this Titan is the nymph Calypso, who kept Odysseus on her island of Ogygia for seven years.

ANSWER: **Atlas** <BKC/AJ>

20.

For 10 points each, answer some questions about children in psychology:

[10] An experiment on a child of this name demonstrated classical conditioning in humans. That experiment taught this child to fear white furry objects by playing him a loud noise whenever he interacted with certain objects.

ANSWER: Little **Albert**

[10] Sigmund Freud ("froyd") took this child's fear of horses as supporting evidence for the Oedipus complex, claiming that the animals' large penises inspired castration anxiety.

ANSWER: Little **Hans** [accept Herbert **Graf**]

[10] Robert Fantz developed his preferential looking paradigm by demonstrating that babies prefer to look at images containing these things. Flat affect is a lack of ability to express emotions using these things.

ANSWER: **faces** <AJ>

TB.
The materials used in this process must be disposed of in sharps containers. For 10 points each:
[10] Name this process by which chemicals are inserted into something using a needle.
ANSWER: **injection**
[10] Injections given to the abdomen are known by this name. These types of injections are common in scientific research on mice or rats.
ANSWER: **intraperitoneal** [accept **IP**]
[10] Experimental control groups will often be injected with this fluid, a mixture of salt and water meant to imitate blood's natural salinity, in order to increase their blood volume.
ANSWER: **saline** <AJ>