2023 Reinstein Set – Packet 4

Tossups

1. Just after this U.S. president's inauguration, he signed a prohibition against torture and an order saying that the Guantanamo Bay detention center would close within a year, though it stayed open. This president later signed the Dodd–Frank Act, creating the Consumer Financial Protection Bureau. This president's American Recovery and Reinvestment Act was passed in response to the Great Recession. This president approved the raid that killed Osama bin Laden. Name this president who defeated John McCain and Mitt Romney and who was America's first Black president.
Answer: Barack (Hussein) **Obama** (II)

2. Chapman–Enskog theory describes this state of matter's diffusion coefficient. A theoretical "perfect" material in this state of matter has a heat capacity that does not depend on temperature. One of the phase changes *away* from this state of matter is ionization. Eleven elements are in this state of matter at standard temperature and pressure. This state of matter is addressed by Gay–Lussac's law, Charles's law, and Boyle's law. The Van der Waals equation allows for intermolecular forces and molecular volume in this state of matter. Name this state of matter that substances enter when they are boiled.
Answer: **gas**es or **gas**eous state or **gas**eous phase

3. The narrator of this novel opens one chapter by remembering the saying "When children are doing nothing, they are doing mischief." That chapter introduces Lord Fellamar, who conspires with Lady Bellaston against a woman who loves this novel's title character. However, that woman's father does not want her to marry the title character because his biological parents are not known. In this novel, Sophia eventually does marry the title character once it becomes known that his mother is Bridget Allworthy. Name this 18th-century English novel about the rival of William Blifil, written by Henry Fielding.
Answer: *The History of **Tom Jones**, a Foundling*

4. This country had a ruler who became its king when he was born in 1886. People in this country eventually called that king "the African" because he spent money on the Rif [reef] War. After that king fled this country in 1931, its monarchy was not restored until 1975. The post-World War II leader of this country was sometimes called the "last surviving fascist dictator", belonged to the Falange [fuh-LAHN-hay] Party, and was named Francisco Franco. During this country's civil war, Franco received help from Adolf Hitler and Benito Mussolini. Name this modern European country located where Isabella I of Castile [ka-STEEL] and Ferdinand II of Aragon once ruled.
Answer: (Kingdom of) **Spain** [or (Reino de) **España**]

5. One of the major competitions in this sport is The Eddie, and three late season competitions are combined to determine the Vans Triple Crown. The only people ever to win Olympic gold medals in this sport were Italo Ferreira and Carissa Moore. Some of the basic moves in this sport are the bottom turn, carve, and cutback, while experienced participants are able to pull off a tube ride. One of the most famous places for this sport is the Banzai Pipeline, which is on the north shore of Oahu in Hawaii. Name this sport in which people on a board ride waves in the water.
Answer: **surf**ing

6. The comic strip *Li'l Abner* inspired this state's Dogpatch USA theme park, which was located near Mystic Caverns and Crystal Dome. This state's Cosmic Cavern is near the town of Berryville. The river that shares its name with this state enters this state from Oklahoma before feeding the Mississippi River. This state is not Massachusetts but contains the Boston Mountains, which are the southern part of the Ozark Mountains. Name this state that contains the towns Fayetteville, Fort Smith, and Hot Springs [pause] and whose capital is Little Rock.
Answer: **Arkansas**

7. One character in this novel has the real name "Theodore", but he does not like it because of the nickname "Dora". In this novel, that character's grandfather says that they can go to London while John Brooke takes care of their business at home. That offer is made in this novel by Mr. Laurence after his grandson's marriage proposal is rejected. Later in this novel, that woman marries Professor Bhaer, and her older sister marries John Brooke. While in Europe, the youngest sister in this novel sees Mr. Laurence and his grandson, Laurie. Name this novel about Amy, Beth, Jo, and Meg March that was written by Louisa May Alcott.
Answer: ***Little Women***

8. The ANCA [AYN-kuh] test of this substance is used for people with autoimmune conditions. The Widal [wee-dahl] test is based on whether this substance agglutinates [uh-GLOO-tin-"eights"] when it is combined with other substances. Another test of this substance measures the level of alpha-fetoprotein. Other agglutination tests of this substance look for particular antigens [AN-tih-jenz] in tests designed by Karl Landsteiner. This substance contains thrombocytes [THRAHM-boh-"sites"], which are commonly called platelets and are useful in clotting. This substance also contains white leukocytes [LOO-koh-"sites"] and red erythrocytes [eh-RITH-roh-"cites"]. Name this substance found in vertebrate circulatory systems.
Answer: **blood**

9. During a premiere performance of one of this composer's works in London, the audience laughed during the bassoon part of *Symphonies of Wind Instruments*. This student of Nikolai Rimsky–Korsakov used the octatonic scale in several pieces, including *Symphony of Psalms*. This composer's fame is based to some extent on ballets he wrote for Sergei Diaghilev [dee-AH-guh-leff], including one in which a girl dances herself to death. Another ballet by this composer depicts three puppets whose jealousies lead them to murder. Name this Russian composer of *Petrushka* and *The Rite of Spring*.
Answer: Igor (Fyodorovich) **Stravinsky**

10. The set of fractions named for this theorem can all be written in the form "p squared minus q squared, all over pq". This theorem is used repeatedly when constructing a spiral of Theodorus. One proof of this theorem is done by setting the integral of $x\,dx$ equal to the integral of $y\,dy$. Another proof of this theorem uses an altitude that breaks a larger triangle into two smaller similar triangles. This theorem is a special case of the law of cosines. This theorem can be used to derive the distance formula. Identify this theorem that relates the lengths of the legs to the length of the hypotenuse of a right triangle.
Answer: **Pythagorean** theorem [accept **Pythagoras**' theorem]

11. This planet is orbited by the *Akatsuki* spacecraft, and it used to be orbited by NASA's *Magellan* spacecraft. The Fortuna Tessera [TESS-ur-uh] is one of many locations on this planet with rough terrain, and its highest volcano is Maat [MAH-aht] Mons. This planet's high point is Skadi Mons in Maxwell Montes [MON-tays], which is in Ishtar Terra. This planet has a retrograde rotation, and one of its days is 243 Earth days. It is difficult to see the surface of this planet because of its sulfuric acid clouds. This planet is the larger of the two with no known moons. Name this planet that is the second from the Sun.
Answer: **Venus**

12. One play by this writer begins with the old Jewish woman Emilia Merz celebrating Christmas with her family in 1899. That play by this author ends in 1955 after many family members have died in the Holocaust. Before writing *Leopoldstadt*, this person wrote a play in which one of the characters wrote the poems "The Maid of Turkey" and "The Couch of Eros". In that play by this writer, Thomasina Coverly is tutored by Septimus Hodge. In another play by this writer, a coin repeatedly lands heads-up. That play by this author features characters from Shakespeare's *Hamlet*. Name this playwright of *Arcadia* and *Rosencrantz and Guildenstern Are Dead*.
Answer: Tom **Stoppard** [or Tomás **Sträussler**]

13. Dan Herbeck and Lou Michel [muh-SHEL] wrote a biography of this person. Lori Fortier [FOR-tee-ay] helped this person get a fake driver's license, and Fortier's husband Michael testified against this person and his accomplice. This person's best known action took place on the second anniversary of the Branch Davidian [duh-VID-ee-un] fire that killed 76 people in Waco [WAY-koh], Texas. When he was killed, this person was the first federal prisoner executed in 38 years. This person destroyed the Murrah Federal Building, killing 168 people, in 1995. Name this person who set off that bomb in 1995.
Answer: Timothy (James) **McVeigh**

14. In 1892, this artist was commissioned to paint a series of pictures for a brothel and made several paintings of the prostitutes during quiet moments, such as *Le Lit [lee]*, which is also called *The Bed*. A lithograph by this artist shows Yvette Guilbert [geel-bair] performing for an audience that includes Jane Avril at the title location, which is *Divan Japonais [zhah-poh-nay]*. In another painting by this artist, the lit-up face of May Milton is shown on the right, and the middle of the picture shows people sitting at a table at a cabaret. Name this French painter who made many posters showing dancers and cabarets, including *At the Moulin Rouge [moo-lan roozh]*.
Answer: Henri de **Toulouse-Lautrec** [awn-ree duh **too-loos loh-trek**]

15. For Muslims, this ritual includes a recitation of the Salat al-Janazah. This ritual is called Antyesti [ahnt-YESS-tee] by Hindus, and it involves the placement of *pindas*, which are rice balls. Instead of this ritual, Zoroastrians use a dokhma [DOHK-muh], which is sometimes called a Tower of Silence in English. Just before this ritual begins, Jews pin torn ribbons to their clothes or tear some of their clothes, and after this ritual, Jews gather in a house to observe *shiva* [SHIV-uh]. Name this ritual that often follows a wake and begins a period of mourning.
Answer: **funeral** [accept **burial** or **cremation** or **memorial** service]

16. The uncinate [UN-sin-"ate"] process is a part of this organ that hooks around the superior mesenteric [meh-zen-TAIR-ik] artery. Some of the cells from this organ are called acinar [ASS-in-ur] cells because they look like grapes. This organ's so-called "juice" contains trypsinogen [trip-SIN-oh-jen] and several enzymes. The duct of Wirsung [VEER-zoong], which is sometimes named for this organ, connects it to the bile duct and through the major duodenal papilla [doo-oh-DEE-nul puh-PILL-uh] to the small intestine. Like the stomach and intestines, this organ has delta cells that secrete somatostatin [soh-MAT-oh-STAT-in]. Name this organ that secretes glucagon and insulin from its islets ["EYE"-lets] of Langerhans.
Answer: **pancreas**

17. In this novel, Pierre requests peasant clothes and a pistol so he can attempt an assassination. In this novel, Pierre also fights a duel when he suspects his wife Hélène [eh-len] of being unfaithful, and he leaves her for a woman who had broken off her engagement to Prince Andrei. This novel describes the marriage of Pierre Bezukhov to Natasha Rostova, who had been loved by Andrew Bolkonski. The wedding occurs in this novel after Pierre became a war prisoner, ending his assassination plan against Napoleon. Name this novel by Leo Tolstoy about the French invasion of Russia.
Answer: ***War and Peace*** [or ***Voyna ee mir***]

18. Though it was used to observe neutrinos [noo-TREE-nohz], the Irvine–Michigan–Brookhaven detector was built to observe the decay of these particles, but the decay of these particles into lighter particles has never been observed despite further efforts by the Super-K experiment. These particles consist of one down and two up quarks. Along with an electron and an anti-neutrino, these particles are created from beta-minus decay. When a nucleus has excess binding energy, these particles can decay into a neutron, positron, and electron neutrino. The atomic number of an element is the number of these particles in an atom. Name these positively charged particles in atomic nuclei.
Answer: **proton**s

19. In 2011, Yemen's Tawakkol Karman [TAH-wahk-kawl KAR-mun] shared a Nobel Peace Prize with two women from this country. One of those women was Leymah Gbowee [LAY-muh BOH-ee], who helped end this country's civil war in 2003. The other woman from this country, who in 2006 became the first elected female head of state in Africa, was Ellen Johnson Sirleaf. Sirleaf has been succeeded by a soccer star from this country, George Weah [WEE-uh]. This country had even more deaths than its neighbors Guinea and Sierra Leone [lee-OHN] during the Ebola virus epidemic that ended in 2016. Name this country that started out as a project of the American Colonization Society, which is why its capital is named Monrovia.
Answer: (Republic of) **Liberia**

20. In one novel by this author, Vernon Roscoe gets caught up in the Teapot Dome scandal. That novel, which was one of several novels by this author about the energy industry, was *Oil!*. This author wrote a series of novels about Irma Barnes's husband, who gets captured by the Nazis in the novel *Dragon's Teeth*, and who is named Lanny Budd. Another novel by this author states "Nobody rose in Packingtown by doing good work." In that novel, this author depicted immigrants to Chicago from Lithuania, including a protagonist who works in the meatpacking industry. Name this author of *The Jungle*.
Answer: Upton (Beall) **Sinclair** (Jr.)

21. This number can be found using the Gregory–Leibniz [LYB-nits] series with all the numerators equal to 4. This number equals twice the length divided by the quantity "probability times strip length" in Buffon's needle problem. Constructing a square with the same area as a given circle using a straightedge and compass is impossible because this number is transcendental. To convert from radians to degrees, multiply by 180 and divide by this number. This number equals the ratio of circumference to diameter for any circle. Name this irrational number equal to about 3.14.
Answer: **pi** [do not accept approximations such as "3.14"]