

AQBL October Set

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Packet 8

1. A “pausing” in this process can lead to the beginning of the surveillance method of no-go decay, and aids in the process of folding. Sites in this process include the exit site, the peptidyl site, and the A site. The start of this process is supported by proteins called (*) initiation factors and includes the production of methionine. Elongation is the phase that occurs between the start and stop codons during this process. tRNAs carry attached amino acids and anticodons that complement the mRNA decoded during this process. Proteins are synthesized in the ribosomes in, for 10 points, what process that follows transcription?

ANSWER: eukaryotic translation <Biology>

2. The mit’a was a public labor requirement in this empire, which made heavy use of the vertical archipelago agriculture system. Tambos and qullqas were often built along this empire’s roads, while its messengers used strings of knots called (*) quipu. A civil war in this empire was won by a son born outside its royal family, and who allegedly ordered the execution of his brother. That leader of this empire was ransomed for a room full of gold and two rooms full of silver, though Spanish conquistadors killed him anyways. Huascar and Atahualpa led, for 10 points, what South American empire conquered by Francisco Pizzaro?

ANSWER: Incan Empire <World History>

3. In one song from this film, the singer states “I’ve got this feeling that won’t subside / I look at you and I fantasize” and “now I’ve got you in my sights / with these” title objects. In a duet used in this film’s soundtrack, a woman sings “oh baby, my sweet baby, you’re the one” after a man asks “Sylvia, how do you call your lover boy?” (*) “Hungry Eyes” by Eric Carmen and “Love is Strange” by Mickey & Sylvia are in the soundtrack to this film, which includes a notable lift performed to the lyrics “I’ve had the time of my life.” For 10 points, name this 1987 film starring Jennifer Grey as “Baby” and Patrick Swayze as a dance instructor at a Catskills resort.

ANSWER: Dirty Dancing <Pop Culture>

4. A “virtual” form of this quantity is performed along a virtual displacement. A principle partly named for this quantity defines it as equal to one-half mass times the difference between two squared velocities. The magnetic force has none of this quantity, and in an Atwood machine only gravity causes a (*) non-zero value of this quantity. Mechanical power is defined as this amount divided by the change in time. For 10 points, name this quantity measured in Joules and often described as the change in energy, equal to the dot product of force and displacement.

ANSWER: mechanical work <Physics>

5. In one story, this character misunderstands the phrase “there’s an east wind coming.” This character marries a governess who is the daughter of a Captain and inherits a large treasure found in the Andaman Islands. This character’s narration is described as “pandering to popular taste,” and an analysis of this character’s watch reveals that his father inherited wealth but was an alcoholic. (*) Mary Morstan marries this character, who worked as an army surgeon before he was wounded in Afghanistan, and narrates many proceedings that begin at 221B Baker Street. For 10 points, name this companion of Sherlock Holmes.

ANSWER: Dr. John H. Watson <British Literature>

6. **The motif for one piece of this type is the eight-note sequence “G-G sharp-F-E-G sharp-A-F sharp-G,” and may have been based on a Bach piece for four voices ending with a B flat major chord. That notably-complicated piece was originally written for Quartet no. [number] 13 by Ludwig (*) van Beethoven. Compositions of this type usually begin with a subject repeated throughout the exposition, followed by entries in different keys. Beethoven wrote a “Grosse” [gross] type of this composition paired in another work with a Toccata in D minor. For 10 points, Bach wrote “*The Art of*” what type of work?**

ANSWER: **fugue** (prompt on string quartet prior to the first mention of “Bach”) <Auditory Fine Arts>

7. **The White Lotus Rebellion caused a silver shortage for one government in this conflict, which was preceded by the Charter Act expanding trade with that country to private merchants. The naval bombardments of the Napier Affair preceded this conflict, which was announced by the (*) Palmerston Letters following Lin Zexu’s closure of the Pearl River Channel. A sequel to this conflict was sparked by the seizure of the *Arrow*, and it ended with the first of the Unequal Treaties, which was signed in Nanking and which ceded Hong Kong. For 10 points, name this conflict over the trade of narcotics in China.**

ANSWER: **Opium** Wars (accept First **Opium** War or Second **Opium** War) <Ancient/Misc. History>

8. **A book titled for this field introduced the terminology *sub specie aeternitatis* to describe what is universally true regardless of reality. In another book titled for this field, the naturalistic fallacy was outlined by G.E. Moore. The Kantian area of this field focuses on the (*) Categorical Imperative, and other areas of its “normative” branch include utilitarianism. G.E.M. Anscombe popularized the “virtue” subfield of, for 10 points, what branch of philosophy that titles a book by Baruch Spinoza and is concerned with the difference between right and wrong?**

ANSWER: **ethics** (or **ethical** philosophy; accept **morals** or **moral** philosophy) <Philosophy>

9. **Daphne was the daughter of a god of one of these places, and Arethusa was turned into a spring after she was pursued by another god of these places. Scamander, a god of one of these places, tried to kill Achilles during the Trojan War, while the father of the Sirens, (*) Achelous, another god associated with these places, lost a wrestling match with Heracles. The Phlegethon is a fiery one of these locations, another of which is associated with forgetfulness. For 10 points, name these physical features in Greek myth, which include the Lethe and Styx.**

ANSWER: **rivers** (prompt on more general answers like bodies of water) <Mythology>

10. **In one story by this author, a man waves at a three-masted Brazilian ship, leading him to suffer from fever and nightmares as he is possessed by the title character. In another story by this officer, a prostitute hides in a church tower and rings its bells every day after using a (*) cheese knife to stab the title Prussian officer. This author of “The Horla” also wrote about Mathilde Loisel, who attends a ball hosted by the Ministry of Education and loses the title piece of jewelry, which turns out to be fake. For 10 points, name this French author of “Mademoiselle Fifi” and “The Necklace.”**

ANSWER: Guy de **Maupassant** <European Literature>

11. **An emigrant to Germany nicknamed “curveball” provided false intelligence about this country that led to the formation of the “Coalition of the Willing.” A large statue in Firdos Square was toppled during an invasion of this country. The “Torture Memos” authorized the use of (*) enhanced interrogation techniques in this country, whose ruler was found hiding near a farmhouse in Tikrit seven months after the U.S.S. *Abraham Lincoln* hosted the “mission accomplished” speech. The CIA tortured detainees at the Abu Ghraib prison in, for 10 points, what country led by Saddam Hussein and invaded by the U.S. in 2003?**

ANSWER: Republic of **Iraq** <American History>

12. In a painting from this place, a woman in a pink dress with white frill is in a seated *mudra* position behind a woman wearing red and orange pants and with a white flower above her left ear. In another painting from this place, an old woman in black watches over a nude woman lying on a white sheet. Another painting of people from this place includes a blue (*) idol on the left as a boy reaches up for a piece of fruit. That work meant to be read right to left shows three women with a child and an old woman covering her head. For 10 points, name this island setting of *When Will You Marry?* and *Spirit of the Dead Watching*, both by Paul Gauguin.
ANSWER: Tahiti <Visual Fine Arts>

13. In 2019, Ralph Northam and CSX announced an expansion of this organization's operations in Virginia, while, in 2015, eight people were killed in an accident caused by a distracted employee of this organization in Philadelphia. Like the postal service, this organization has struggled with lack of (*) profitability in rural areas, but has the added issue of not owning most of its infrastructure. Richard Anderson and William Flynn are recent CEOs of this organization, and have ended full dining service and tried to cut long-distance routes to focus on the northeast corridor. For 10 points, name this American passenger rail service.
ANSWER: Amtrak <Current Events>

14. This poet described watching a train "lick the Valleys up / And stop to feed itself at Tanks." In another poem, this author describes "the winds" as "futile...to a Heart in port" and exclaims "Might I but moor - tonight - / In thee!" Another of this author's poems describes passing "fields of gazing grain" and how "the Dews drew quivering and Chill" when a figure (*) "passed us." In that poem by this author of "I like to see it lap the Miles," the narrator rides in a carriage that "held but just ourselves / and immortality." For 10 points, name this author of "Wild nights" and "Because I could not stop for Death."
ANSWER: Emily Dickinson <American Literature>

15. Polignac's conjecture and Legendre's conjecture concern gaps between these numbers. For a large N , the probability of randomly generating one of these numbers is about 1 divided by $\log(N)$. The Miller-Rabin test and the AKS test are methods of checking if a number belongs to this group, whose (*) Sophie Germain subset are used to determine "safe" examples of these numbers for public key cryptography. The Sieve of Eratosthenes can also be used to find these numbers, whose Mersenne subgroup is the group of these numbers that are 1 less than a power of 2, like 3, 7, and 31. For 10 points, name these numbers that can only be factored by themselves and 1.
ANSWER: prime numbers (or primes; accept Mersenne prime or Sophie Germain prime)
<Math/Other Science>

16. Under acidic conditions, the opening of an epoxide results in one of these functional groups getting placed at the less-substituted position. In a two-step process, an alkene is first reacted with mercury (II) acetate and then sodium borohydride to form into the (*) anti-Markovnikov one of these functional groups. Reacting PCC with the primary form of one of these functional groups results in the formation of an aldehyde, and these functional groups readily form hydrogen bonds with water due to their oxygen-hydrogen bond. For 10 points, name this functional group whose simplest molecules are methanol and ethanol.
ANSWER: alcohol group <Chemistry>

17. Stones are thrown at three pillars in a re-enactment of the Stoning of the Devil as part of this activity. The Miqat needs to be crossed for Ihram to be attained at the beginning of this activity, during which men are required to wear two white cloths. The Umrah is a form of this activity undertaken at any (*) point during the year, rather than during its traditional dates. While performing this activity, individuals walk between two hills

named Safa and Marwah seven times, and visit the Zamzam Well, which is in the same city as the Great Mosque. For 10 points, name this annual Islamic pilgrimage to Mecca.

ANSWER: Hajj (accept Umrāh before mention) <Religion>

18. In one film set in this city, the reporter Mike Connor offers to marry Tracy Lord after she cancels her wedding with George Kittredge, but she remarries her ex-husband instead. That film, starring James Stewart, Cary Grant, and Katherine Hepburn, is partially titled for this city, which also titles a film following Andrew Beckett, a lawyer suffering from (*) AIDS. Bill Conti composed “Gonna Fly Now” for a film set in this city; that song is played as the title character does push ups and runs through this city, culminating in a climb up the steps of its Museum of Art. For 10 points, name this city, the setting of Sylvester Stallone’s *Rocky*.

ANSWER: Philadelphia (accept The Philadelphia Story as that is the first film mentioned; the second film mentioned is “Philadelphia”) <Other Fine Arts>

19. The Della Torre family lost control of this city after the 1277 Battle of Desio. One ruler of this city defected after its government recalled him from the Siege of Brescia, and besieged this city to end its Ambrosian Republic. This city was captured by Francis (*) I after the Battle of Marignano, and became territory of the Holy Roman Empire after the death of Francesco II. Condottieri who led this city include Ottone Visconti and Ludovico Sforza. For 10 points, name this city-state and Duchy that formed the Italian League with the Papal States, Naples, Venice, and Florence.

ANSWER: Duchy of Milan <European History>

20. In this novel, a naval commander is banished after attempting to seduce a woman at a party, and later falls down a well. Another character in this novel was made Keeper of Horses before leaving and naming themselves a “great sage.” That character is sealed under a (*) mountain for five hundred years before assisting with an effort to retrieve Buddhist scrolls from Vulture Peak. In this novel, a part-human, part-pig character accompanies a monk and a monkey who wields the staff Ruyi Jingu Bang and has mastered 72 transformations. Zhu Bajie, Xuanzang, and Sun Wukong travel to India in, for 10 points, what classical Chinese novel?

ANSWER: Journey to the West (or Xi You Ji; accept Monkey) <World/Misc. Literature>