

**Bulldog High School Academic Tournament 2018 (XXVII): After such knowledge, what forgiveness?**

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**Packet 10 Tossups**

1. **If a carbon's three front substituents descend in "priority" counter-clockwise, it's labelled with this letter. An element denoted by this letter is the lightest to form an octet-rule-breaking hexafluoride. Allotropes of that element with this symbol form rhombic and monoclinic crystal structures. Changes in a quantity denoted by this letter are only zero for (\*) reversible processes; that quantity denoted by this letter equals Boltzmann's constant times the natural log of the number of microstates of a system. A chalcogen with this symbol forms eight-membered rings and is responsible for rotten eggs' smell. For 10 points, name this letter used to represent entropy and the element sulfur.**

ANSWER: S <AF>

2. **This play includes the first recorded use of the idiom "wearing your heart on your sleeve." A character in this play calls reputation "an idle and most false imposition" and tells the audience that he's going to lie by saying "I am not what I am." Its title character is furious when his wife "loses" a strawberry-patterned handkerchief. A character in this play tells (\*) Brabantio that his daughter is making "the beast with two backs" with the title character. In this play, that husband of Emilia calls jealousy "the green-ey'd monster" and is infuriated by Cassio's promotion. For 10 points, name this Shakespeare tragedy, in which Desdemona is killed after Iago tricks the title Moor of Venice.**

ANSWER: Othello <MK>

3. *Description acceptable.* **One of these people named Elijah Harper conducted a 1987 filibuster to scuttle a proposed constitutional change. A subgroup of these people kept records using a geometrical writing system on birch bark scrolls. Garnet Wolseley suppressed a rebellion of these people in 1870. These people rose up in the North-West and Red River Rebellions, after which their leader Louis (\*) Riel was executed by John A. Macdonald. The Métis are descendants of both these people and colonial settlers. Their largest subgroups include the Cree and Ojibwe. Members of the First Nations and Inuits make up the majority of—for 10 points—what original inhabitants of the U.S.'s northern neighbor?**

ANSWER: Aboriginal Canadians [accept Native Canadians or any answer indicating Native Americans or Amerindians in Canada; accept First Peoples; accept Cree, Ojibwe, First Nations, Inuit or Métis until they're mentioned; do not accept or prompt on answers like "Native Americans"] <JR>

4. **A piece in this genre surprisingly begins with a soft, eight-note, solo G-major chord, most of which is then repeated four times as part of the main theme. In Mozart's works in this genre it's common practice for one member of the ensemble to play unwritten *basso continuo*. Edvard Grieg wrote his only work in this genre in imitation of Robert Schumann's A (\*) minor work in it. Mozart wrote 27 numbered pieces in this genre and, like cello sonatas, Beethoven wrote five pieces in this genre. In Mozart's "Jeunehomme" and Beethoven's "Emperor" works in this genre, the soloist enters shockingly early. For 10 points, name this orchestral genre with a keyboard soloist.**

ANSWER: piano concertos [prompt on partial answer] (The first piece is Beethoven's 4th concerto.) <JW>

5. **This philosopher originated the idea that self-consciousness comes from the recognition of other consciousnesses, which inverts the subject-object relation. This philosopher posited that seemingly contradictory terms can be “lifted up” or “sublated” into a “higher” concept, in what he called *Aufhebung*. Karl (\*) Marx claimed to have stood this philosopher “on his head.” This philosopher thought that history consists of the growing self-knowledge of the “world-spirit.” This man’s method is often oversimplified as “thesis-antithesis-synthesis.”** For 10 points, what German idealist described the master–slave dialectic and built on the work of Kant in his *Phenomenology of Spirit*?

ANSWER: Georg Wilhelm Friedrich Hegel <JW>

6. **Cancer cells mostly avoid using this molecule in what’s termed the Warburg effect. Amounts of this molecule dissolved in water can be determined using the Winkler test. This molecule is produced along with four electrons by P680. Levels of this molecule are determined in BOLD-contrast imaging. Before the Calvin cycle, this molecule is (\*) “evolved” in the light-dependent reactions.** Levels of this molecule are used as a proxy for brain activity in fMRI scans. Levels of this molecule are depleted by eutrophication and algal blooms, and areas of ocean low in it are called dead zones. Hemoglobin binds—for 10 points—what gas produced by photosynthesis?

ANSWER: oxygen [or O2] <JR>

7. **In January 2018, the owner of the Econet Group became the first billionaire born in this country. Supporters of this country’s current leader carry stuffed reptiles to play on his nickname of “the Crocodile.” The leader of this country’s G40 political faction attracted controversy when she was accused of using an extension cord to assault a model. The head of this country’s armed forces, Constantino (\*) Chiwenga, placed its president under house arrest in November 2017 in a move its military insisted was not a coup d’état.** For 10 points, name this African country that has been led by Emmerson Mnangagwa since Robert Mugabe’s removal from power.

ANSWER: Republic of Zimbabwe <MK>

8. **This was the main political party of Massachusetts schools reformer Horace Mann. Decades before his nomination, Horace Greeley was a major public advocate for this party. In its first presidential election, this party tried to split the vote regionally by running four different candidates. It gained much of its early support from former members of the (\*) Anti-Masonic Party.** This party’s Southern supporters mainly joined the Know-Nothings. This party nominated war heroes like Winfield Scott, Zachary Taylor, and William Henry Harrison. The Jacksonian Democrats were opposed by—for 10 points—what political party that shared its name with the British opponents of the Tories?

ANSWER: Whig Party <JR>

9. **A girl in this novel becomes a governess for the well-to-do King family. This novel’s tenth chapter recounts the meetings of a book club inspired by *The Pickwick Papers*. At the end, one of its protagonists starts an experimental boys’ school with Professor Bhaer. In this novel’s first chapter, its main characters reminisce about a charades-like game based on John Bunyan’s (\*) *Pilgrim’s Progress*.** Mr. Laurence gives one of its title characters a piano. In this novel, the Hummels are given Christmas breakfast by a family led by Marmee, whose daughter Beth dies of scarlet fever. Meg, Jo, Beth, and Amy March are the title girls of—for 10 points—what Louisa May Alcott novel?

ANSWER: Little Women <MK>

10. **This organization lost popularity after attempting to enforce the Law of the Maximum's price caps. This organization implemented the first *levée en masse*. This organization, which gained power from the Law of Suspects, supported the rise of the Hébertistes led by Camille Desmoulins [day-moo-LAAN]. This organization was created in response to the (\*) Vendée by the National Convention. It established the Cult of the Supreme Being. Georges Danton was the first president of this organization, whose power ended with the 1794 Thermidorian Reaction. The Reign of Terror was committed by—for 10 points—what group led by Maximilien Robespierre, which, despite its name, executed hundreds of people?**

ANSWER: Committee of Public Safety [or Comité de salut public] <JR>

11. **This is the name of a man whose left hand touches his chest while his right hand points upward in a very dark painting that's thought to be Leonardo da Vinci's last work. A man with this name is depicted with a book on the far left of an Albrecht Dürer painting of four men. A non-Jesus man with this name is depicted in Raphael's (\*) Madonnas *of the Meadow* and *of the Goldfinch*. An effeminate-looking man with this name leans away from Jesus's right in Leonardo's *Last Supper*. Titian and others depicted *Salome with the Head of a man* of this name. For 10 points, give the name of the saint depicted in Leonardo's *The Baptism of Christ*.**

ANSWER: Saint John [accept John the Baptist or John the Apostle or John the Evangelist] <JW>

12. **In an early role, this actress says “why you gotta know something like that for sure when you don't,” in a monologue where she repeats “it's just till June.” Despite having only one scene, she was nominated for Best Supporting Actress for playing Donald's mother in *Doubt*. In a 2011 film, her character works for the “Godless woman” Elizabeth and helps Skeeter write about her fellow (\*) maid, Minny. In a 2016 film, this actress gained attention for “snot-crying” as Rose Maxson, the wife of the garbageman Troy. For 10 points, name this black actress who played Aibileen in *The Help*, stars in *How to Get Away With Murder*, and starred opposite Denzel Washington in *Fences*.**

ANSWER: Viola Davis <JR>

13. **In a play, this character hears three peals of thunder signalling his impending death after cursing his two sons to kill each other. A play about this king opens with people placing wool-wrapped olive branches on an altar in the hopes of lifting a plague. A messenger from Corinth tells this man about his father's death and reveals that (\*) Merope is not his real mother. This character, who solved the Sphinx's riddle, charges Creon with taking care of his daughters Ismene and Antigone after learning the truth about Jocasta. Sophocles wrote two plays titled after—for 10 points—what king of Thebes who blinds himself after realizing that he's married his mother?**

ANSWER: Oedipus [accept Oedipus Rex] <MK>

14. **An analogy that compares these phenomena to electrical signals defines their impedance as the ratio of pressure to flow rate. Hermann von Helmholtz names a kind of cavity that amplifies these phenomena at a particular frequency. A parameter governing these phenomena marks the onset of choked flow in compressible fluids. These phenomena travel at a (\*) speed proportional to the square root of air pressure over air density, which works out to about 343 meters per second in room-temperature air. Objects moving faster than these phenomena have a Mach number greater than 1. For 10 points, name these longitudinal waves whose intensity is measured in decibels.**

ANSWER: sound waves [accept frequency before “frequency”; prompt on waves before “longitudinal waves”] <SE>

15. **This period saw the development of emmer, einkorn, and six other “founders.” Our understanding of this period was drastically revised in the late 1990s by the discovery of the extremely old site of Göbekli Tepe. Tools from this period are polished or ground, as opposed to (\*) flaked.** The Anatolian settlement of Çatalhöyük [chah-“TALL” hur-yewk] was built during this period. Stonehenge was probably begun during it. This period’s “Revolution” included the adoption of pottery, permanent settlements, animal domestication, and agriculture. It was followed by the Bronze Age. For 10 points, name this last part of the Stone Age.

ANSWER: Neolithic period [prompt on Stone Age until it’s mentioned; accept Neolithic Revolution; accept Chalcolithic or Copper Age] <JR>

16. **A dispute over this man was settled by a curse called a *mubahala*. This man breathes life into a clay bird in the third surah, which is named for his grandfather, Imran. This man, who spoke in the cradle, revealed the *injl*, and he’s mentioned more than any other person in the Quran. Either this man or the (\*) Mahdi will slay the false Dajjal before the Day of Judgement.** The Qur’an’s 19th surah is named for this man’s mother, who receives an annunciation from Jibril, or Gabriel. For 10 points, name this penultimate Messenger who preceded Muhammad, who Muslims hold is the son of the Virgin Mary, but not the son of God.

ANSWER: Isa ibn Maryam [accept Jesus Christ or obvious equivalents] <HK>

17. **The face of this animal can be found on depictions of a Gnostic deity known as Yalda-baoth [Y AHL-dah-BOWTH], Saklas, or the Demiurge. Ovid’s *Metamorphoses* attributes the colour of the mulberry fruit to the splashing blood of a youth who believes that one of these animals has killed his lover Thisbe [THIZZ-bee]. Toward the end of their lives, (\*) Atalanta and Hippomenes turn into these animals. Near the town of Cleonae, a youth tells Heracles that he will sacrifice himself to Zeus if one of these animals is not killed within thirty days; Heracles then kills that animal from Nemea as his first labour.** For 10 points, name this animal that forms the lower body of the Sphinx.

ANSWER: lion [or Panthera leo or P. leo; accept Nemean lion] <SPQR>

18. **This man claimed that the “form” and “sense” drives can be balanced by play in a treatise in the form of “letters.” A poem by him describes people as “fire-drunk” when entering the “sanctuary” of the title concept. This author of *On the Aesthetic Education by Man* wrote a poem declaring “You millions, I embrace you / This kiss is for all the world!” as well as a play about the clash between the brothers Franz and Karl (\*) Moor. The title figure of one of his odes is called a “daughter of Elysium.” He was a proponent of “Weimar Classicism” with his friend Johann Wolfgang von Goethe [yoh-hahn vulf-gahng fon GUR-tuh].** For 10 points, name this German author of *The Robbers* and “Ode to Joy.”

ANSWER: (Johann Christoph) Friedrich (von) Schiller <JW/MK>

19. **An opera in this language includes a repeated motive that quickly goes up the first five notes of a major scale. That opera in this language displays the influence of Freemasonry in its opening scene, where three ladies kill a serpent. In an opera in this language, the Drum-Major seduces Marie, who is stabbed by the title soldier. In another opera in this language, some bells are given to the (\*) bird-catcher Papageno.** That opera in this language includes coloratura high Fs sung by the Queen of the Night, who doesn’t want Pamina to marry Tamino. For 10 points, name this language of Alban Berg’s *Wozzeck* [VOTT-tzeck] and Mozart’s *The Magic Flute*.

ANSWER: German [or Deutsch] <JR>

20. **These objects can develop large cracks known as bergschrunds. These objects leave wedge-shaped chatter marks. These objects can create rosary bead-like formations that are thus called “paternoster.” Isostatic rebound results from the absence of these objects, which are divided into zones of (\*) accumulation and ablation, or “wastage.” “Erratics” are relocated by these objects, several of which create horns and arrêtes. Their deposits include kames, eskers, and drumlins. They lose mass by calving and they create moraines. Fjords are carved out by—for 10 points—what large, slow-moving bodies of ice?**

ANSWER: glaciers <JW>

*Tiebreaker*

21. **It didn’t happen in the 14th century, but this event is narrated right after the “Plans” section near the beginning of Barbara Tuchman’s most famous book. The July Ultimatum was a response to this event. Its main participant had tried to drown himself in a 4 inch-deep river and take a faulty cyanide pill, but was able to carry it out after a (\*) car that had taken a wrong turn stalled almost directly in front of him. Sophie, Duchess of Hohenberg, was killed in this event by a member of the Black Hand. Gavrilo Princip carried out this action in Sarajevo, causing Austria-Hungary to declare war on Serbia. World War I was sparked by—for 10 points—what murder of an Austrian archduke?**

ANSWER: assassination of Archduke Franz Ferdinand of Austria [accept reasonable equivalents; prompt on partial answer] <JW>

## Bonuses

1. The surface integral of a vector field can be calculated by dotting the function with this vector and then integrating. For 10 points each:

[10] Give this word used to denote a vector or line that points out from a given plane or curve. The choice of the negative or positive one of these vectors reflects an object's orientation.

ANSWER: **normal** vector [do **not** accept or prompt on "orthogonal" or "perpendicular"]

[10] In the normal *distribution*, 68% of the area lies less than this distance from the mean. This quantity is the square root of the variance, and it measures the spread of a set of data.

ANSWER: **standard deviation** [prompt on partial answer; prompt on **sigma**]

[10] A normal *matrix* must satisfy *this* property with respect to its Hermitian adjoint. Matrix multiplication, unlike multiplication of numbers, generally does *not* have this property.

ANSWER: **commutativity** [accept word forms like **commutative** property or "it **commutes** with..."] <AF>

2. This architectural style's name comes from a French word for "raw." For 10 points each:

[10] Name this mid-20th-century architectural movement that emphasized the use of exposed concrete. Buildings in this style include Boston's City Hall.

ANSWER: **brutalism** [accept word forms]

[10] The origins of brutalism lie in this architect's use of what he called "raw concrete," as exemplified by his *Unité d'Habitation*. He designed the chapel of Notre Dame du Haut.

ANSWER: **Le Corbusier** [or Charles-Edouard **Jeanneret**]

[10] Le Corbusier also planned this country's city of Chandigarh. This country's monuments include the Brihadisvara Temple at Thanjavur and the Iron Pillar in Delhi.

ANSWER: Republic of **India** [or **Bharat** Ganarajya] <AF>

3. This protagonist was the model for John Irving's character of Owen Meany. For 10 points each:

[10] Name this protagonist of a 1959 novel, who narrates his novel from a mental hospital. He takes a number of odd jobs, including modelling nude for an art studio, playing in a jazz band, and engraving tombstones.

ANSWER: **Oskar Matzerath**

[10] Oskar Matzerath is the protagonist of *The Tin Drum*, the first novel in this German author's Danzig Trilogy. He also wrote *Crabwalk*.

ANSWER: Günter (Wilhelm) **Grass**

[10] The fact that Oskar's father dies swallowing a pin for *this* political party has been taken as a hint that Germany can't simply try to ignore its years of rule by this party.

ANSWER: **Nazi** Party [or **National Socialist** German Workers' Party; or **Nationalsozialistische** Deutsche Arbeiterpartei; or **NSDAP**] <MK>

4. For 10 points each—answer the following about agriculture...in Greek mythology:

[10] Whenever her daughter Persephone is whisked away to the underworld, this Greek goddess of agriculture uses her sadness to bring winter to the earth.

ANSWER: **Demeter** [do **not** accept "Ceres"]

[10] This son of Apollo has such a knowledge of agriculture that he can even teach humanity how to keep bees. In another myth, he falls in love with Orpheus's wife Eurydice and chases her until she is fatally bitten by a snake.

ANSWER: **Aristaeus** [AAH-riss-STEE-uss]

[10] Fertility rites may have been introduced this Greek hero who is loved by both Aphrodite and Persephone. Unfortunately, he's gored to death by a boar, but at least his blood creates the anemone flower.

ANSWER: **Adonis** <SPQR>

5. For 10 points each—answer the following about ideas of love in the New Testament:

[10] In First Timothy, Paul declares that the love of this substance is “a root of all kinds of evil.” According to Jesus, it’s easier for a camel to enter the eye of a needle than for someone with a lot of *this* to enter heaven.

ANSWER: **money** [accept obvious equivalents like **wealth** and **riches**]

[10] According to Paul, this type of love is selfless and unconditional. It was the namesake of feasts common among early Christians.

ANSWER: **agape** [AH-gah-pay]

[10] John 3:16 describes how God “so loved the world” that he did *this* action. A description is fine.

ANSWER: **gave his only begotten son** [accept any answer indicating that he **gave** or **sacrificed** his **son**] <MK>

6. “*Deus vult*” was the rallying cry at the Council of Clermont, which called for this campaign. For 10 points each:

[10] Name this first of a series of failed campaigns aimed at reclaiming the Holy Land for Christianity.

ANSWER: **First Crusade** [prompt on partial answer]

[10] The pope who called for the First Crusade, Urban II, was born with *this* given name. This was the name of the son of Henry the Fowler who won the Battle of Lechfeld.

ANSWER: **Odo** [or **Otho** or **Eudes** or **Otto**]

[10] The First Crusade met its end at the Battle of Ascalon, when forces led by Godfrey of Bouillon and Raymond IV of Toulouse were defeated by *this* Ismaili caliphate, which was once ruled by the “Mad Caliph” Al-Hakim.

ANSWER: **Fatimid** Caliphate [accept **Fatimites**] <MK>

7. The precise measurement of variations in this quantity is known as geodesy. For 10 points each:

[10] Name this quantity that, on the Earth's surface, is approximated by “big *G* times Earth's mass, over the square of Earth's radius.”

ANSWER: **acceleration** due to **gravity** [prompt on partial answer; prompt on **gravity** or **gravity field**; prompt on **g** or **little g**; do not accept or prompt on “big *G*” or “gravitational constant”]

[10] Multiplying an object’s mass by the acceleration due to gravity gives this force measured in pounds. Unlike mass, this quantity would be reduced by a factor of six for a person on the Moon.

ANSWER: **weight**

[10] The real force of gravity is indistinguishable from an apparent force due to acceleration, according to a version of this principle propounded by Albert Einstein as part of his theory of general relativity.

ANSWER: **equivalence** principle [accept weak **equivalence** principle or Einstein **equivalence** principle] <SE>

8. In the *Rhetoric*, Aristotle identifies two main types of this concept, the general and the particular. For 10 points each:

[10] Name this Greek rhetorical term, which denotes common sources of information or recurrent subject matter. It literally means “place,” and it was a key part in the rhetorical canon of invention.

ANSWER: **topos** [or **topoi**; accept **locus** or **loci**; prompt on **topics**]

[10] This text by Aristotle defines a number of literary terms, including *hamartia* and catharsis. It argues that a tragic hero should be noble, and his downfall should inspire fear and pity in the audience.

ANSWER: **Poetics** [or *De Poetica*; or *Peri Poetikes*]

[10] Aristotle’s *Poetics* partly responds to the ideas this philosopher had put forth in dialogues like *Ion*. This man wrote that poets should be expelled from the ideal state in his *Republic*.

ANSWER: **Plato** [or **Platon**] <SPQR>

9. Bob Hamman is often regarded as the all-time greatest player of this game. For 10 points each:

[10] Name this card game played by two pairs of players who bid to choose a “contract.”

ANSWER: contract **bridge**

[10] The basic mechanism of bridge involves each player playing a card and then one person winning or taking those four cards, which are given *this* name. This is the name of each round in a game of Hearts or Pinochle.

ANSWER: **tricks**

[10] Bridge is descended from this other trick-taking game that was widely played in England during the eighteenth and nineteenth centuries. Bridge was originally called “Russian [this].”

ANSWER: **whist** <JW>

10. For 10 points each—answer the following about American artist Faith Ringgold.

[10] Ringgold is best-known for works like *Tar Beach 2*, which tell stories through *this* medium. A number of works in this medium were made by ex-slave Harriet Powers.

ANSWER: story **quilts**

[10] Ringgold was born during this period of African-American cultural ferment, which centered around its namesake New York neighborhood in the 1920s.

ANSWER: **Harlem Renaissance**

[10] A recurring motif in Ringgold’s sculpture are these objects, which are a major part of the arts of Dogon, Fang, Yoruba, and other cultures. These objects are often used as part of ritual dances.

ANSWER: **masks** [prompt on **costumes**; accept **masquerades**] <JR>

11. Isaac Butt founded a “League” to promote this political cause, which was the goal of two bills introduced to the House of Commons by William Gladstone. For 10 points each:

[10] Name this specific form of Irish self-government, which is distinct from independence. Between about 1870 and 1920, it was popular among nationalists and some British Liberals but generally opposed by Unionists.

ANSWER: Irish **Home Rule** [prompt on Irish **nationalism**]

[10] Support for Home Rule faded after an April 1916 rebellion known as this holiday’s “rising.” The rebellion is usually commemorated on whichever spring Sunday this Christian holiday falls on.

ANSWER: **Easter** [accept **Easter** Rising or **Easter** Rebellion]

[10] Two years after the Easter Rising, the nationalist party Sinn Féin [shin fayn] declared the formation of *this* legislative body. A body of the same name is the lower house of the modern-day Oireachtas [eer-ISH-tas], or Irish parliament.

ANSWER: **Dáil** Éireann [dool yair-in] [or First **Dáil**] <SE>

12. Captain Vere condemns the protagonist of this novel to death with the words “Struck dead by an angel of God! Yet the angel must hang!” For 10 points each:

[10] Name this novel whose title sailor is executed for murdering John Claggart. This unfinished novel, its author’s last, ends with a newspaper extract and a ballad that both seem to contradict the main plot.

ANSWER: **Billy Budd, Sailor** [accept **Billy Budd, Foretopman**]

[10] This American author of *Typee* wrote *Billy Budd*, as well as *Moby-Dick*.

ANSWER: Herman **Melville**

[10] At the end of *Moby-Dick*, Ishmael escapes the wreckage of the *Pequod* atop one of *these* objects, which Queequeg had custom-made.

ANSWER: a **coffin** [accept **casket**] <MK>

13. The Oklahoma City bombing was carried out exactly two years after the end of a two-month standoff near this city. For 10 points each:

[10] Name this Texas city. The FBI conducted a protracted siege of the Mount Carmel religious compound near this city, which ended with David Koresh and 75 other members of the Branch Davidians perishing in a fire.

ANSWER: **Waco** Siege

[10] The Waco siege was handled by Janet Reno, the Attorney General under this president. Other women in his administration included Secretary of State Madeleine Albright and his wife, a future presidential candidate.

ANSWER: Bill **Clinton** [or William Jefferson **Clinton**]

[10] FBI agents at the Waco siege included sniper Lon Horiuchi, who shot Vicki Weaver at *this* armed standoff the year before. It arose from U.S. Marshals' attempts to arrest Vicki's husband, Randy, at their home in northern Idaho.

ANSWER: **Ruby Ridge** <SE>

14. For 10 points each—answer the following about related countries in Africa:

[10] This island country has recently made efforts to distance itself from other African countries in order to strengthen its ties with Europe. It's currently led by Jorge Carlos Fonseca and has its capital at Praia.

ANSWER: Republic of **Cabo Verde** [accept República di **Kabu Verdi**, República de **Cabo Verde**, or **Cape Verde**]

[10] Cabo Verde, Guinea-Bissau, and Angola are three of the six African countries which have this language as an official language. Brazil is the only country in South America that officially uses this European language.

ANSWER: **Portuguese** [or **português** or lingua **portuguesa**]

[10] This Lusophone African city is known by the nicknames "City of Acacias" and "Pearl of the Indian Ocean." As the dominant political party, FRELIMO currently holds sway in this capital city of Mozambique.

ANSWER: **Maputo** <MK>

15. Besides sucking blood, mosquitoes also carry some nasty diseases. Answer the following about them, for 10 points each:

[10] Tu Youyou won the Nobel Prize in Medicine in 2015 for the discovery of artemisinin, whose derivatives are now used along with quinine to treat this mosquito-borne disease, caused by a parasite of the blood.

ANSWER: **malaria** [or **Plasmodium**]

[10] While mosquitoes of the genus Anopheles carry malaria, this other genus of mosquitoes can carry other diseases like Zika, dengue, and yellow fever.

ANSWER: **Aedes**

[10] Mosquitoes can also carry viruses which cause the West Nile and St. Louis types of *this* condition characterized by swelling of the brain. The herpes simplex virus can cause another form of this condition.

ANSWER: **encephalitis** [do not accept or prompt on "meningitis"] <HK>

16. For 10 points each—answer the following about water in early philosophy:

[10] This man believed that the origin of nature and matter was water. Aristotle considered him to have been the first Greek philosopher.

ANSWER: **Thales** of Miletus

[10] This other early Greek philosopher is most famous for his statement "*panta rhei*," which is translated either literally as "everything flows" or figuratively as "no man steps in the same river twice."

ANSWER: **Heraclitus**

[10] Thales, Heraclitus, and other early Greek philosophers are often categorized as having been "pre-" *this* man. This teacher of Plato is told of the association between water and icosahedra by the namesake of the *Timaetus*.

ANSWER: **Socrates** [accept Pre-**Socratic** philosophers or **Socratic** method] <AF>

17. For 10 points each—answer the following about jazz pianist Bill Evans:

[10] Evans is best-known for his work on this trumpeter's album *Kind of Blue*. This man's "electric" period began with the album *In a Silent Way*.

ANSWER: Miles (Dewey) **Davis** III [prompt on Miles]

[10] Evans's distinctive sound partly comes from his use of "drop 2" voicings while playing in *this* texture. In this texture, the right hand plays chords right under each note of the tune, often alternating add-6 and diminished chords.

ANSWER: **block chord** [prompt on partial answer]

[10] When not playing with block chords, Evans often voiced chords built by stacking this "perfect" interval, which is just smaller than a tritone.

ANSWER: perfect **fourth** <JR>

18. This civilization's centers included Palenque and Chichen Itza. For 10 points each:

[10] Name this civilization that lasted for thousands of years in modern Guatemala and the Yucatán peninsula. They were the only Mesoamericans to use hieroglyphics, and they were probably the earliest people to use the number 0.

ANSWER: **Mayan** civilization

[10] The Mayans notated numerals with *this* relatively large number as the base. The base for Babylonian numerals was three times this number, a usage that persists to this day in contexts that were once relevant to astronomy.

ANSWER: base-**20** [or **vigesimal**] (Base-60 counting is still used when measuring angles and time.)

[10] Like many Mesoamerican civilizations, the Maya made ritual use of *this* sport designated by a generic English name.

ANSWER: **ballgame** <MK>

19. The owner of this location, Sir Thomas Bertram, leaves early in the novel to deal with "problems" on his plantation in Antigua. For 10 points each:

[10] Name this location dominated by the shrewish Mrs. Norris, who's the aunt of the protagonist, Fanny.

ANSWER: **Mansfield** Park [accept **Mansfield Parsonage** or any other part of the **Mansfield Estate**]

[10] In this other novel by the author of *Mansfield Park*, the greedy Fanny Dashwood stops her husband John from taking financial care of his half-sisters. Those half-sisters, Elinor and Marianne, represent its title characteristics.

ANSWER: ***Sense and Sensibility***

[10] Both of the aforementioned Fannys were created by this author of *Sense and Sensibility*. Fanny Burney's novel *Cecilia* inspired the title of this author's *Pride and Prejudice*.

ANSWER: Jane **Austen** <MK>

20. "Meso" compounds contain a stereocenter but lack this property due to a plane of symmetry. For 10 points each:

[10] Name this property that gives rise to optical isomers. Isomers of molecules with this property are often distinguished using the letters D and L.

ANSWER: **chirality** [accept word forms; prompt on handedness]

[10] Chirality often arises when an atom of *this* element is attached to four different atoms or groups. Organic compounds have a "backbone" of this element.

ANSWER: **carbon** [or **C**]

[10] This term refers to optical isomers that are mirror images of one another. The relative difference between the two types of these compounds in a mixture is known as this term's namesake "excess."

ANSWER: **enantiomers** [accept **enantiomeric excess**] <AF>

*Tiebreaker*

21. The central family of this novel got their fortune from a button factory owned by their father Norval. For 10 points each:

[10] Name this novel with a highly nested structure, in which Iris Chase discloses her longtime affair with the pulp sci-fi author Alex Thomas.

ANSWER: *The **Blind Assassin***

[10] The author of *The Blind Assassin* is most famous for a novel that features Scrabble games in a theocratic state with *this* name. This Biblical place names a 2004 novel by *Housekeeping* author Marilynne Robinson.

ANSWER: Republic of **Gilead**

[10] This Canadian woman wrote *The Blind Assassin* and created the Republic of Gilead in her novel *The Handmaid's Tale*.

ANSWER: Margaret **Atwood** <JR>