

Spring TJ Academic Scholastic Housewrite (STASH)

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Packet 3

Tossups

1. **Despite connections between this man and his son and Cotecna Inspection SA, he was cleared of wrongdoing in the Oil-for-Food scandal. In 2001, this man founded The Global Fund to fight AIDS and was a member of Nelson Mandela's NGO The Elders until this man's death in 2018. This man claimed to have "no regrets" about how he handled the Rwandan Genocide after being criticized for inaction while serving as head of the (*) United Nations Peacekeepers. This man was succeeded in his highest position by Ban Ki-Moon in 2006. For 10 points, name this Ghanaian diplomat and Nobel Prize winner who served as the seventh Secretary-General of the United Nations.**

ANSWER: Kofi Atta Annan <Jaishanker, History - Misc>

2. **Composer and type of work required. An A-major theme in 6/8 time from one of these works was treated in a set of orchestral variations by Max Reger. The second and last of these works to be written in a minor key is often paired with a C-minor fantasy. It's not a symphony, but one of these works in B-flat-major was written in the city of Linz. The 16th of these works begins with a simple C-major melody over (*) Alberti bass, is marked "for beginners," and is numbered 545 in the Köchel catalogue. An A-major final movement from one of these works imitates Ottoman janissary bands and is a rondo subtitled "alla turca." For 10 points, name this set of works for piano written by the composer of *Eine Kleine Nachtmusik*.**

ANSWER: piano sonatas by Wolfgang Amadeus Mozart [prompt on partial answer; accept Mozart sonatas after "piano"] <Graf, Fine Arts - Auditory>

3. **A specific instance of this action is commemorated on a day alternatively dubbed the Octave of the Nativity or the Feast of Naming. In Talmudic tradition, childless couples can receive *segula* by acting in the role of *kvatter* during instances of this action. This action is often performed with a tool called an *izmel*, after which the presiding figure engages in *metzitzah b'peh*, a controversial practice in which the (*) mouth is used to cleanse blood. After God gives Abraham his new name, he declares that the sign of the covenant shall be Abraham performing this action on himself and his sons. For 10 points, give this action usually conducted by a *mohel* in Judaism, in which a baby boy's foreskin is removed.**

ANSWER: circumcision [accept word forms such as circumcising a child; accept bris or brit milah; accept removing foreskin or equivalents before "foreskin"; prompt on genital mutilation, as some people consider circumcision to be such] <Kanigicherla, Beliefs - Religion>

4. **In one form of this technique, a sample is placed in a pan sitting on a constantan disc with a chromel wafer underneath. Another form of this technique can use background experiments such as “water into water” and displays its results in a graph where spikes correspond to ligand injection. This technique is often performed alongside TGA and used to measure glass transitions in its (*) differential scanning variety. The mnemonic equation “q equals mCAT” is used to calculate the result of this technique. A constant-volume type of this technique is termed “bomb,” while a constant-pressure variant used in many introductory labs involves two nested coffee cups and a thermometer. For 10 points, name this technique for measuring the heat produced in a reaction.**

ANSWER: calorimetry [accept differential scanning calorimetry; accept isothermal titration calorimetry; prompt on titration alone; accept DSC or ITC] <Calin, Science - Chemistry>

5. **This author wrote about a boy who receives a drum from Big Mom after being frightened by a vision of his grandmother in the short story “A Drug Called Tradition”. The narrator of a story by this author dreams of his father listening to Jimi Hendrix at Woodstock while recounting his parents’ divorce. In a novel by this author, the protagonist angrily throws his geometry textbook after seeing his mother’s (*) name in it. After beating his former school in a basketball game, that character breaks down as he recalls the rampant drug and alcohol problems on his reservation. For 10 points, name this Native-American author who wrote about Junior in *The Absolutely True Diary of a Part-Time Indian*.**

ANSWER: Sherman Alexie <Li, Literature - American>

6. **Nearly 400,000 religious and administrative documents were found in this present-day country in a large storeroom, or *genizah*, at the Ben Ezra synagogue. The vizier Shawar ordered the burning of a city in this country so that Christians could not take it. The Druze hold that a leader who ruled from this country went into occultation, rather than mysteriously disappearing. Though he was born on the (*) Iberian Peninsula, Maimonides wrote most of his best-known work in this country. The so-called “Mad Caliph” al-Hakim ruled from this country as part of a dynasty which was eventually invaded and overthrown by the Ayyubids under Saladin. For 10 points, name this country once ruled by the Fatimid Caliphate and Mamluk dynasty.**

ANSWER: Egypt [or al-Misr] <Kaashyap, History - World>

7. **This man created a character who asks if the Apostles were “thoroughly crazy” and disputes the justification for eternal damnation. Besides *Dialogue Among a Philosopher, a Jew, and a Christian*, this thinker contributed to the “Limbo of Infants” theory. While not Ockham, this pupil of Roscellinus was a strong proponent of nominalism, the idea that universals are mere words. A work by this philosopher asks questions like “Is there any knowledge of things (*) unseen?” and answers them contradictorily. This man described his love affair with an Argenteuil nun in his autobiography *Historia Calamitatum* and compiled 158 religious theological questions in his most famous work. For 10 points, what French Scholastic wrote *Sic et Non* and married Heloise?**

ANSWER: Peter Abelard <Zhang, Philosophy>

8. **In the *Lay of Atli*, when the title king asks where his sons are during one of these events, Gudrun reveals that she killed them. A quest to obtain an object for one of these events leads two gods to meet a giant’s 900-headed mother, then undergo several strength tests, in the *Lay of Hymir*. The servant Fimafeng is murdered during one of these events which features a *flyting* contest, in which Thor threatens four times to (*) decapitate another god for insolence. That example of these events takes place in Aegir’s dwelling and provides the setting of the *Lokasenna*. In *Beowulf*, one of these events is interrupted when Grendel attacks the great hall of Heorot. For 10 points, name these events where attendees drank mead and ate large meals together.**

ANSWER: feasts [or banquets, or parties; prompt on gatherings or celebrations; do not accept or prompt on “weddings” or “funerals” as none of the events in question are for one of those occurrences] <Kaashyap, Belief - Mythology>

9. Replacement series methods created by de Wit have been criticized for use in explaining this phenomenon due to the density dependence of results. Supply pre-emption can result in the “size-asymmetric” form of this phenomenon which is described by R-star parameters introduced by David Tilman. Joseph Connell coined the term “ghost of [*this phenomenon*] past” and explored one form of this phenomenon (*) between barnacles in intertidal zones. Examples of it include large aphids defending feeding sites on leaves by ejecting smaller ones. Two coexisting species may not occupy the same ecological niche as a result of its namesake “exclusion principle.” For 10 points, name this phenomenon in which limited resources lead to both species being harmed.

ANSWER: competition [accept size-asymmetric competition; accept interspecific competition; accept competitive exclusion principle; anti-prompt on interference] <Ni, Science - Biology>

10. This character's name appears in the title of a poem that describes “three pale figures” who “died as men before their body died”. In one work, an adaptation of this character imagines travelling to Africa to see his father Afolabe. In that work, an adaptation of this character owns a canoe inscribed with the words “In God We Trust”. In another work, after killing Lycaon and Asteropaeus, this character is nearly (*) drowned three times by a river god, Scamander. This character appears as a fisherman in a Derek Walcott poem. The beginning of an epic invokes a muse to sing “of the rage of [this character]”. For 10 points, name this mythological warrior who kills Hector in the *Iliad*.

ANSWER: Achilles [accept Achille because that’s the name of the character in *Omeros*, accept “The Shield of Achilles”] <Chen, Literature - World>

11. A series by this artist was defaced with cartoon animal heads by Jake and Dinos Chapman in their exhibit “Everyday Life”. This artist depicted a shaft of light shining on a naked man in a tricorne and a gloomy yard filled with lunatics in his paintings of asylum inmates. This man’s *The Milkmaid of Bordeaux* likely depicts his lover Leocadia Weiss, while the Duchess of Alba may have modelled for (*) clothed and nude versions of a woman lounging on a couch. A painting by this artist is lit entirely by a single lantern on the ground and depicts a man in a white shirt raising his hands before a firing squad. For 10 points, name this Spanish artist of the *Black Paintings* and *Third of May, 1808*.

ANSWER: Francisco Goya <Kanigicherla, Fine Arts - Visual>

12. A speech given by this politician compares a certain policy to “loathsome folds” of the “terrestrial serpent” encircling the globe. Along with Carl Shurz, this politician led opposition to Ulysses Grant’s attempted annexation of Santo Domingo. This politician chaired the Select Committee on Slavery and Freedom that created the Freedmen’s Bureau. A speech given by this politician praised the “repulse of the Missouri invaders by the beleaguered town of (*) Lawrence”. This politician gave a speech that denounced Andrew Pickens Butler for taking as a mistress “the harlot slavery”, “The Crime Against Kansas”, after which he was attacked by Butler’s cousin, Preston Brooks. For 10 points, name this Massachusetts senator who was caned on the Senate floor.

ANSWER: Charles Sumner <Lee, History - American>

13. This country’s Tulcea (“tool-CHAY-ah”) County contains a river delta that surrounds the Razim lagoon complex. *Borat* was filmed north of Targoviste in this country, one of two cities that acted as this country’s capital in the 15th and 16th centuries. Saxon fortified churches can be found in this country’s Sibiu county, which is crossed by the Olt river. The largest hydroelectric dam in this country is made of two stations called the (*) Iron Gates. Cities in this country include Constanța on the Black Sea coastline and Timișoara (“tee-mee-SHWA-rah”) near its border with Serbia. Wallachia (“vuh-LAKH-ee-uh”) and Moldavia are regions of, for 10 points, what Balkan country that contains the delta of the Danube river and has its capital at Bucharest?

ANSWER: Romania <Lian, Modern World - Geo>

14. This phenomenon is minimized at the optimal fineness ratio which gives “perfect shapes” like the von Kármán ogive. Common military engineering techniques used to reduce the impact of this phenomenon include the Whitcomb area rule and the use of Sears-Haack profiles. The magnitude of this phenomenon is roughly constant for small values of the angle of attack, to which it is proportional. At (*) subsonic speeds, the primary form of this force is due to skin friction, in which case it is termed “parasitic.” A ratio between this quantity and lift is commonly calculated. Nose cone design and streamlined body profiles generally seek to minimize, for 10 points, what aerodynamic force which acts opposite to the direction of motion?

ANSWER: aerodynamic drag [accept parasitic drag; accept air resistance; accept wave drag; accept skin friction drag; prompt on friction] <Calin, Science - Physics>

15. A character in this play analogizes the body to a garden and wills to gardeners after another character threatens to drown himself. After drunkenly beating a man, a character in this play laments that he has “lost the immortal part of myself” in a speech about reputation. A father in this play is enraged after hearing an analogy of an “old (*) black ram tugging [his] white ewe” and is warned that he is making the “beast with two backs”. A misplaced handkerchief found by the prostitute Bianca causes the title character of this play to smother his wife with a pillow. For 10 points, name this Shakespeare tragedy in which Iago tricks the title “Moor of Venice” into killing his wife Desdemona.

ANSWER: Othello [or or The Tragedy of Othello, the Moor of Venice] <Chen, Literature - British>

16. The use of optimization algorithms in this technique such as TreeMaker to pack circles and rivers in order to form a uniaxial structure was developed by Robert Lang. Parallelograms are often used in the “modular” form of this technique. A book by Eleanor Kerr follows the story of a young bomb victim who created 1,000 objects using this technique and connected them with strings, which supposedly grants a (*) wish from the gods. Common bases created using this technique include fish, blintz, and kite. The first treatise on this technique was named for the *Senbazuru*, a motif which was created by Sadako Sasaki before her death. “Mountain” and “valley” folding techniques are used in, for 10 points, what Japanese art form used to make paper cranes?

ANSWER: origami [accept modular origami; prompt on folding or paper folding] <Calin, Modern World - Misc. Academic>

17. For two years, this politician conducted most of his affairs out of a train which published the propaganda newspaper *En Route*. This politician denounced “bureaucratism” in his book *The New Course* and examined the failings of his colleagues in *Lessons of October*. This *de facto* head of the Left Opposition faction and proponent of “permanent revolution” argued that the (*) New Economic Policy had severely damaged socialist goals. This chief negotiator at Brest-Litovsk organized the mobilization of the Red Army after the revolt of the Czechoslovak Legion in the Russian Civil War. He was killed by Ramon Mercador, who was wielding an ice axe, while in exile in Mexico City. For 10 points, name this early rival of Josef Stalin.

ANSWER: Leon Trotsky [or Lev Davidovich Bronstein] <Kaashyap, History - European>

18. The ballerina who premiered this character asked Leon Minkus to write a new *pas de deux* featuring her to replace the Act III *pas de six* she first appears in. In 1960, George Balanchine choreographed the original composer’s replacement for that *pas de deux*, which precedes a scene in which this character laughs as a man turns into a demon. In a 1895 revival by Drigo, Ivanov, and Petipa, Pierina Legnani performed 32 consecutive (*) *fouettés* as this character. This daughter of Rothbart disguises herself as another character to trick Prince Siegfried into marrying her. For 10 points, name this character whose often dark costume contrasts with that of Odette in a Tchaikovsky ballet titled for a certain bird.

ANSWER: Odile [or the Black Swan; prompt on Von Rothbart’s daughter before mention] <Yue, Fine Arts - Other>

19. Powder bed fusion methods for this technique can make use of laser sintering. One form of this technique works like stereolithography by subjecting a vat to UV light. Recyclebot is a device that converts waste material into the input for this technique which is used in the RepRap project. Fused deposition modeling is the most commonly used process in this technique which uses thermoplastics like acrylonitrile butadiene styrene as (*) filament materials for extrusion. Thingiverse is an online repository for files used in this technique which are the input for MakerBot machines. The STL file format is used in CAD models for rapid prototyping using this technique. For 10 points, name this technique used to create three dimensional objects layer by layer.

ANSWER: **3-D printing** [or **three-dimensional printing** or metal **additive manufacturing**; prompt on printing; prompt on photopolymerization; prompt on rapid prototyping before mention] <Calin, Science - Applied/Eng>

20. At the end of this poem, a group of workmen discover a “cold corpse” in a battered hut where “not a blade of grass has grown”. After finding a lone willow tree where his lover’s house once stood, a character in this poem becomes delirious and roams the streets for a year. This poem’s protagonist climbs onto the back of a marble lion to escape rising water levels after the (*) Neva river begins “tossing like a sick man” and floods, killing his beloved Parasha. After cursing this poem’s title figure, Yevgeny begins to run as he hears the sound of “hooves behind him pounding. For 10 points, name this Alexander Pushkin poem about an equestrian statue that comes to life.

ANSWER: "The **Bronze Horseman**" [or "The **Copper Horseman**"; or "**Mednyi Vsadnik**"] <Zhang, Literature - European>

Bonuses

1. The annealing temperature in PCR depends on the percent content of these two nucleobases, because the melting point of DNA increases with it. For 10 points each:

[10] Name these two bases that are joined by three hydrogen bonds in DNA, unlike adenine and thymine.

ANSWER: **guanine** and **cytosine** [accept **G** and **C** or **GC** content]

[10] Betaine and DMSO can be added to these mixtures to improve the amplification of GC rich DNA templates. These mixtures used in RT-PCR usually contain dNTPs, magnesium chloride, Taq polymerase and a buffer.

ANSWER: **master mix**

[10] The addition of DMSO can also prevent the formation of dimers of these molecules which is also avoided in “hot-start” protocols. These molecules are complementary sequences to the target DNA region being amplified.

ANSWER: **primers** [accept **primer** dimers] <Calin, Science - Biology>

2. One of these, the *Imago Mundi*, dated back to 6th century BC Babylonia, was first translated in 1889 and currently resides in the British Museum. For 10 points each:

[10] Name these objects, medieval European versions of which were known as the “T and O” variety that might depict seas or continents. John J. Pershing notably created one of these which became a useful blueprint for the Interstate Highway System.

ANSWER: **maps**

[10] Of course, there are different types of maps! This cylindrical map projection was named after a Flemish cartographer and was mistakenly labeled by Joseph Needham as being discovered by the Song dynasty of China hundreds of years before he did.

ANSWER: **Mercator** projection

[10] This two word phrase was taken from the personal motto of Charles V and was adopted as the national motto of Spain following Columbus’s discovery of the New World. It was a modification to a phrase inscribed on the Pillars of Hercules that warned against travelers going beyond the known map of classical antiquity.

ANSWER: “**plus ultra**” [or “**Further beyond**”]; do not accept or prompt on “non plus ultra” or “Nothing further beyond”] <Wang/Lee, History - Misc>

3. One character emerges from these objects before asking for a sugar plum. For 10 points each:

[10] Name these objects. In a play whose set is shaped like a skull, a legless elderly couple lives inside two of these objects that are “covered with an old sheet”.

ANSWER: **trash cans** [accept **ash bins** or equivalents]

[10] Two ashbins appear in the stage directions of *Endgame*, a play by this Irish absurdist author of *Waiting for Godot*.

ANSWER: Samuel **Beckett**

[10] In *Waiting for Godot*, this character rambles about the “Acacacademy of Anthropometry” in a famous monologue after another character commands him to “think”.

ANSWER: **Lucky** <Chen, Literature - British>

4. Answer some questions about the Hong Kong headquarters of HSBC, for 10 points each:

[10] The building was designed by this man, a British architect best known for his restoration of the Reichstag and his work on “the Gherkin.”

ANSWER: Norman **Foster**

[10] At the top of the HSBC Hong Kong, two cranes made to look like these implements were installed to aim at the nearby Bank of China building to combat its bad *feng shui*.

ANSWER: **cannons**

[10] Two statues of these animals sit outside of the building, and are actually replicas of a pair outside of the HSBC Shanghai. Two statues of these royal cats outside of the New York Public Library are named Patience and Fortitude.

ANSWER: **lions** <Lian, Fine Arts - Other>

5. Answer some things about pre-Socratic philosophers and their beliefs. For 10 points each:

[10] This student of Leucippus believed that atoms made up the universe. This “laughing philosopher” stated that only atoms and void existed in the universe.

ANSWER: **Democritus**

[10] This rival of Parmenides gained the epithet “The Obscure” because of the difficulty of understanding his sayings. This philosopher from Ephesus believed in the idea that “Everything is in flux”.

ANSWER: **Heraclitus**

[10] The philosopher legendarily threw himself into Mount Etna according to Diogenes Laërtius. This philosopher who wrote *On Nature* and *Purifications* proposed the idea of the four elements.

ANSWER: **Empedocles** <Chen, Thought - Philosophy>

6. This symphonic movement was meant to be performed with the popular *Rugby* and the significantly less popular *Symphonic Movement No. 3*, which the composer quipped “paid dearly for its barren title.” For 10 points each:

[10] Name this short symphonic poem by Arthur Honegger that uses *pizzicato* strings to depict a frenzied steam locomotive. It was supposedly written as an exercise to build momentum in spite of a progressively slowing tempo.

ANSWER: ***Pacific 231***

[10] This minimalist composer’s piece *Different Trains*, for string quartet and cassette, was inspired by the trips he made between New York and Los Angeles to visit his parents during World War II. He also wrote *Clapping Music*.

ANSWER: Steve **Reich**

[10] Heitor Villa-Lobos, a composer from this country, included the toccata “Little Train of the Caipira” in his second orchestral suite partly titled for it. This South American country is home to the *samba* and *bossa nova* music.

ANSWER: **Brazil** <Prasad, Fine Arts - Auditory>

7. Blue goo is a form of soil derived from mélanges of this rock found in the Franciscan Complex. For 10 points each:

[10] Name this rock which can be formed from the metamorphism and oxidation of peridotite. Ophiolites are named for the presence of this rock in them and its namesake mineral group contains chrysotile or white asbestos.

ANSWER: **serpentinite** [accept **serpentine** soil; accept **serpentinization**]

[10] Serpentinite is usually this color and can be found in large “belts” of rock of this color within Archaean and Proterozoic cratons. Serpentine mélanges also contain schists of this color.

ANSWER: **green** [accept **greenschist** or **greenstone** belts]

[10] The Franciscan Complex was named by geologist Andrew Lawson and stretches along the coastline of this state. This tectonically active state is home to the San Andreas Fault.

ANSWER: **California** <Calin, Science - Earth>

8. This region was traditionally led by the Thain. For 10 points each:

[10] Name this fertile region in Eriador. It was invaded by wolves during the Fell Winter after the Brandywine river froze. It was shielded from outside enemies by the Rangers of the North, and was home to The Green Dragon Inn.

ANSWER: the **Shire**

[10] The central town of the Shire was named after these beings, the primary inhabitants of the Shire. That town was the home of Bilbo Baggins, one of these beings.

ANSWER: **hobbits**

[10] A member of this other family served as Thain of the Shire after the departure of the Oldbucks. One member of this family invented golf after decapitating the goblin king Golfimbul, while another was Bilbo Baggins's mother.

ANSWER: **Took** <Kaashyap, Modern World - Misc. Academic>

9. In this story, Josie sings the somber song *This Life is Weary* while playing the piano. For 10 points each:

[10] Name this short story in which Laura Sheridan learns that her neighbor Mr. Scott has died while preparing for the title event.

ANSWER: "The **Garden Party**"

[10] "The Garden Party" was written by Katherine Mansfield, who was born in this country. Keri Hulme's novel *The Bone People* explores this country's Maori culture.

ANSWER: **New Zealand**

[10] In *The Garden Party*, Mr. Scott's death is announced by Godber's man, who is delivering these food items for the party. Laura fills a basket with sandwiches, cakes, and these foods to give to Mr. Scott's widow at the end of the story.

ANSWER: cream **puffs** [prompt on pastries] <Chen, Literature - World>

10. A viral TikTok about the persecution of these people, disguised as a makeup tutorial, was suspended from the platform after an alleged Chinese intervention. For 10 points each:

[10] Name this minority Turkic ethnic group. As of November 2019, it is estimated that over 1 million people of this ethnicity are being detained in Chinese re-education camps.

ANSWER: **Uighurs**

[10] The Uighurs are currently being detained in this province of China, which also claims part of the disputed Aksai Chin region with India.

ANSWER: **Xinjiang** ("sheen-j'yang") Uygur Autonomous Region [accept **Chinese Turkestan** or **East Turkestan**, do not accept or prompt on "Turkestan" alone]

[10] Under the recent Uyghur Human Rights Policy Act, President Trump imposed sanctions on Chen Quanguo, the CCP Secretary in Xinjiang, using this other law. This 2012 law, which allows the US to freeze the assets of anyone accused of human rights abuses, is named after a tax accountant who died in a Moscow prison.

ANSWER: **Magnitsky** Act <Jaishanker, Modern World - CE>

11. The European Free Trade Association member states are a de facto part of this entity. For 10 points each:

[10] Name this collection of European nations that do not have any form of border control at their mutual borders. It is named after a 1985 agreement signed in Luxembourg.

ANSWER: **Schengen** Area [accept **Schengen Agreement**]

[10] Most members of the Schengen Area are also part of this organization, which was established in the Treaty of Maastricht. Its primary legislative branch is the European Parliament, and it is headquartered in Brussels.

ANSWER: **European Union** [accept **EU**]

[10] Along with its neighbor to the north, this country was obligated to join the Schengen Area when it joined the EU in 2007. Concerns about government corruption led to this country's admission being delayed until 2018, and it has not yet been implemented.

ANSWER: Republic of **Bulgaria** <Kaashyap, History - European>

12. The ancestor of all these beings is Ymir, a primordial creature who was sacrificed by Odin, Vili, and Ve to create the cosmos. For 10 points each:

[10] Name this race of beings from Norse mythology who appear as antagonists of Thor in many tales. Fiery examples of these beings live in the realm of Muspelheim.

ANSWER: **giants** [or **jötunn**, or **jötnar**]

[10] This giant disguised himself as Skrymir and played tricks on the gods who entered his castle, such as making Thor lift a cat who turned out to be the Midgard Serpent. His name is similar to that of another Norse deity.

ANSWER: **Utgard-Loki** [or **Útgarda-Loki**; do not accept or prompt on just “Loki”]

[10] In another story, Thor’s hammer Mjöllnir is stolen by this giant, who seeks to use it to bargain for Freya to be his wife. Thor asks to use Mjöllnir to bless this giant’s wedding, but instead uses it to kill all giants in attendance.

ANSWER: **Thrymr** <Kaashyap, Belief - Mythology>

13. Answer some questions about the rare pigments on display in the Forbes Pigment Collection at Harvard. For 10 points each:

[10] The collection houses a pigment of this color that can be extracted from sea snails. The Tyrian shade of this “royal” color was used to dye togas by the ancient Romans.

ANSWER: **purple**

[10] Another vial on display is a brown pigment made by grinding up these objects. Many of these objects uncovered in the city of Fayum were accompanied by encaustic portraits.

ANSWER: **mummies**

[10] Another pigment called Indian yellow is made from the dried urine of cows fed with the leaves of this fruit. Paul Gauguin painted several portraits of Tahitian women holding this fruit, one of which is being plucked by the central figure of *Where Do We Come From? What Are We? Where Are We Going?*.

ANSWER: **mangoes** <Li, Fine Arts - Visual>

14. In this novel, Captain Littlepage visits the narrator, who rents a schoolhouse along the coast to focus on her writing. For 10 points each:

[10] Name this novel set in Dunnet Landing. The narrator of this novel stays with the widow Ms. Almira Todd, where she hears stories about characters such as Abby Martin and Mrs. Blackett.

ANSWER: The ***Country of the Pointed Firs***

[10] The author of *The Country of Pointed Firs*, Sarah Orne Jewett, was from Maine, as was this poet, who wrote about a man “clean favored, and imperially slim” in “Richard Cory”

ANSWER: Edward Arlington **Robinson**

[10] This author described his visit to the “enormous, pungent, and extremely well marketed Maine Lobster Festival” in his essay collection *Consider the Lobster*. A novel by this author is centered on the members of the Incandenza family.

ANSWER: David Foster **Wallace** <Chen, Literature - American>

15. Bovine serum albumin or bovine gamma globulin can be used to create a standard curve in this technique. For 10 points each:

[10] Name this assay that determines the concentration of protein in solution based on absorbance shift of Coomassie Brilliant Blue G-250.

ANSWER: **Bradford** protein assay

[10] The Bradford assay can detect amino acids *without* this property and improves on methods that measure a 280 nm absorbance. Amino acids *with* this property include tyrosine, phenylalanine, and tryptophan.

ANSWER: **aromatic**

[10] Using microscale spectrophotometry in the Bradford assay can eliminate the need for a cuvette to solve for the extinction coefficient in this law. This law relates the absorbance of a substance to its concentration.

ANSWER: **Beer's law** [or **Beer–Lambert** law, or **Lambert–Beer** law, or **Beer–Lambert–Bouguer** law] <Calin, Science - Chemistry>

16. This man borrowed a phrase from Ricardo Flores Magón in ending a manifesto with a call for "land and freedom!" For 10 points each:

[10] Name this revolutionary who called for extensive land reforms in the Plan of Ayala.

ANSWER: Emiliano **Zapata** Salazar

[10] Zapata helped overthrow the government of this leader, which he defeated at the Battle of Cuautla. Francisco Madero was elected in 1911 after this leader resigned and went into exile in Spain

ANSWER: Porfirio **Díaz** [or José De La Cruz Porfirio **Díaz** Mori]

[10] Zapata allied with this man in the Convention of Aguascalientes. John J. Pershing unsuccessfully attempted to capture this bandit in the Punitive Expedition after he led a raid on Columbus, New Mexico.

ANSWER: Pancho **Villa** [or Francisco **Villa**] <Kaashyap, History - World>

17. A poem by this author asks the title "wisest and fairest of the Angels" to "take pity on my long misery!" For 10 points each:

[10] Name this author. This author describes a "prince of cloud and sky" whose "giant wings prevent him from walking" in a 1857 collection.

ANSWER: Charles **Baudelaire**

[10] Poems such as "The Albatross" and "The Litanies of Satan" were collected in this Symbolist collection by Charles Baudelaire. This collection includes sections such as "Spleen and Ideal" and "Revolt".

ANSWER: *The **Flowers of Evil*** [or *Les **Fleurs du Mal***]

[10] Charles Baudelaire dedicated his poem "The Swan" to this author. This author describes visiting the grave of his daughter Leopoldine in a poem that begins "Tomorrow, at dawn".

ANSWER: Victor **Hugo** <Chen, Literature - European>

18. For 10 points each, answer the following about eating dead human flesh in religion on the Indian subcontinent:

[10] India contains most "towers of silence," where dead members of this religion are exposed to be eaten by vultures. Members of this religion in India are called Parsees, referring to the fact that they came from Persia.

ANSWER: **Zoroastrianism** [or **Zoroastrian** religion; or **Mazdaism**]

[10] The popular yogi Sadhguru had to censor several images of this goddess in his posts about her on Facebook, as they portray rituals of orgiastic cannibalism. This dark-skinned goddess personifies the wrath of Durga.

ANSWER: **Kālī** [or **Kālikā**, or **Shyāmā**; prompt on **Shakti** or **Devi**]

[10] This city on the Ganges is the center of the Kali-worshipping Aghori sect, known for its practice of eating the flesh of corpses. This city was supposedly founded by Shiva, who is honored at its Kashi Vishwanath temple.

ANSWER: **Varanasi** [or **Benares**, or **Banaras**, or **Kashi**]

<Kanigicherla, Belief - Religion>

19. Launch periods are often calculated from porkchop plots, which show the amount of this quantity needed to achieve the mission, its namesake “budget.” For 10 points each:

[10] Identify this quantity that is calculated as effective exhaust velocity times a log ratio of the initial and final masses according to the Tsiolkovsky rocket equation.

ANSWER: **delta-v** [or the **change in velocity**; accept **delta-v** budget]

[10] Delta-v is used in spacecraft flight dynamics to describe the impulse required to perform a maneuver between these trajectories, which can be described by the *vis-viva* equation.

ANSWER: astronomical **orbits**

[10] The *vis-viva* and ideal rocket equations can be derived from the conservation of energy and this quantity. This quantity symbolized p is the product of mass and velocity.

ANSWER: linear **momentum** [accept conservation of **momentum**] <Calin, Science - Physics>

20. This book describes its subjects as the last “single-combat warriors” going into battle with the “Soviet Integral”. For 10 points each:

[10] Name this 1979 book by Tom Wolfe about the first years of the American space program.

ANSWER: *The **Right Stuff***

[10] *The Right Stuff* describes the careers of the seven astronauts who were part of this first American manned spaceflight program. John Glenn became the first American to orbit the Earth as part of this program.

ANSWER: **Mercury** Program [accept **Mercury** Seven]

[10] Wolfe contrasts the Mercury Seven with this test pilot, who was excluded from the astronaut program because he didn’t have a college degree. He nicknamed his Bell X-1 plane the *Glamorous Glennis*.

ANSWER: Charles “Chuck” **Yeager** <Wang, History - American>