

2016 “stanford housewrite”

Edited by Stephen Liu

Written by Austin Brownlow, Stephen Liu, Benji Nguyen, Nathan Weiser, James Bradbury, Kyle Sutherlin, Alex Freed, Jennie Yang, Nikhil Desai, and Martina Fu

PACKET 11

TOSSUPS

1. **Along with frontotemporal dementia, this condition is strongly linked to a GGGGCC repeat expansion in a noncoding region on chromosome 9. Patients with FTLT or this condition often show buildups in misfolded FUS and TDP-43 proteins. A4V and G93A are among the more than twenty missense mutations linked with this disease; those mutations, which may cause the misfolding and aggregation of superoxide dismutase, are in the (*) *SOD1* gene.** Sufferers of this condition may exhibit symptoms like the “pseudobulbar affect,” or uncontrollable periods of laughing or crying. This condition, which is often mitigated by the drug Riluzole, is characterized by symptoms of both upper and lower motor neuron damage. In late stages of this condition, muscle atrophication prevents speaking, swallowing, or breathing. For 10 points, name this disease that causes rapid degeneration of motor neurons, which afflicts Stephen Hawking and Lou Gehrig.
ANSWER: amyotrophic lateral sclerosis [or ALS; accept modifiers like “familial” or “sporadic”; accept Lou Gehrig’s disease until mention; prompt on motor neuron disease or MND]
2. **This work’s protagonist likes to imagine that he is the “first man on earth” when he needs motivation in the early morning. The narrator of this work recounts a time he and his cousins ransacked a picnic shortly after expressing his disdain for wars, claiming, “My own war’s all that I’ll ever be bothered about.” A cop in this work is referred to as “old Hitler-face” and routinely pesters this work’s protagonist, who collects “a cool five hundred” in insurance after his father (*) dies of throat cancer.** This work’s narrator is sent to Essex after the money stored in his drainpipe, seventy pounds he had stolen with Mike from a local bakery, washes out in front of a policeman. In this story’s final section, the narrator is forced to scrub floors for six months after he allows the boys from Gunthrope to win the All-England Borstal Blue Ribbon Cup. For 10 points, name this story about a disgruntled athlete named Smith, a work by “angry young man” Alan Sillitoe.
ANSWER: “The Loneliness of the Long Distance Runner”
3. **In the lower right of one of this artist’s paintings, a self-portrait looks at the viewer while kneeling in a group of Swiss Guards. In that painting, a black-robed Felice della Rovere holds her red cap in her hand while her father prays on a raised altar platform. The central scene in another painting by this artist is visible through a crossed iron gate, behind which a glowing angel visits a dejected saint in his prison cell. The bread of the Eucharist drips blood onto a tablecloth, forming cross-like marks, in this man’s *The Mass at (*) Bolsena*, and he worked on his *Liberation of St. Peter* with his assistant, Giulio Romano. In another work, he borrowed from the *Laocoön* group to portray the blind face of Homer, who stands above a woman holding a scroll inscribed with her name, Sappho. Surrounded by the Muses and various poets, Apollo plays a violin in that painting, *Parnassus*.** For 10 points, name this Italian Renaissance painter whose namesake Vatican stanzæ contain his *The School of Athens*.
ANSWER: Raphael [or Raffaello Sanzio]
4. **This person’s success encouraged the endeavors of Green DeWitt and Martín De León. He is depicted leaning against a stump and clutching his rifle in a marble statue created by Elisabet Ney for a state capitol building. This man’s father founded the town of Potosi in Missouri and gained his fortune as an early lead tycoon. He worked with Erasmo Seguin to loosen regulations that banned slavery and forced his constituents to practice Catholicism. This man, who ignored the limitations placed on him by the Law of April 1830, helped raise the army that put down Haden Edwards’ (*) Fredonia rebellion. After the death of his father, Moses, this man took over leadership of the “Old Three Hundred.” The foremost of the empresarios, this man established a settlement on the Brazos River. This man was eventually eclipsed in stature by younger politicians like Mirabeau Lamar and Sam Houston.** For 10 points, name this leader of early American migration to Texas who names its modern state capital.
ANSWER: Stephen Fuller Austin

5. Whether the religious use of this substance is allowed or forbidden distinguishes the “white-capped” and “black-capped” sects of Islam. A certain object used in a ritual involving this substance has a name meaning “the big artichoke” and is operated by eight men called *tiraboleiros*. The wounds of Jesus are represented by the incorporation of five pieces of this substance in the material of Paschal candles. According to the Talmud, *maaleh ashem* was a secret ingredient used by the House of Avtinas in the (*) preparation of this substance. Rituals centered on flowers, tea, and this substance constitute the three classical Japanese arts of refinement. *Dhupa* is the use of this substance as part of a *puja*. This substance is coated onto bamboo cores in the production of joss sticks. During Mass, this substance is carried in a thurible that the priest swings from side to side at the altar. For 10 points, name this plant-based substance that releases fragrant smoke when burned.

ANSWER: incense

6. Visitors to this ruler’s court included the Spanish ambassador Don García de Silva Figueroa and the Italian adventurer Pietro della Valle. This ruler won the Battle of Urmia during a war that ended with the Treaty of Nasuh Pasha. This ruler lost and then recaptured the cities of Mashhad and Herat during a war against the Uzbeks in Khorasan. Among this emperor’s court favorites was the historian Iskandar Beg Munshi and the general Allahverdi Khan. This ruler executed his eldest son for spearing a boar before this man did during a hunt, and left the throne to his grandson (*) Shah Safi. This son of Mohammad Khodabanda established the city of New Julfa as a haven for Armenians. With the help of Anthony and Robert Shirley, this man created a standing army of *ghulams* in order to reduce the influence of the Qizilbash. This ruler also moved his capital from Qazvin to Isfahan. For 10 points, name this grandson of Tahmasp I who ruled the Safavid Empire from 1588 to 1629.

ANSWER: Shah Abbas the Great [or Shah Abbas I; prompt on “Abbas”]

7. Shruti Agnihotri, an activist for Akhil Bharatiya Vidyarthi Parishad, was identified in a video from this city recorded by Zee News. Tribal activist and AAP official Soni Sori is receiving treatment in this city, whose Patiala House Court saw lawyers assault Kanhaiya Kumar on February 17, 2016. February 2016 protests in the adjacent state of Haryana blocked the water supply to this city; those protesters sought Other Backward Caste designation for the Jat caste group despite not meeting any OBC classification guidelines. After a February 9, 2016 demonstration in this city to mark the death anniversary of executed (*) Kashmiri terrorist Afzal Guru, the student body president at this city’s Jawaharlal Nehru University was arrested on sedition charges stemming from alleged chants of “Pakistan Zindabad.” As a largely unsuccessful pollution control measure, the government of this city introduced odd-even car rationing in January 2016. For 10 points, name this Indian city led by Chief Minister Arvind Kejriwal of the Aam Aadmi Party, the capital territory of the republic.

ANSWER: New Delhi

8. In one section of this book, a character dreams of a soothsayer who proclaims that the future is completely empty. At the end of that dream, a coffin bursts open, provoking a horde of laughter. This text claims that women are incapable of friendship as they are too occupied with love in a section that argues that close friends must be prepared to behave as enemies. This text calls those who preach for democracy and equality “tarantulas” and the first part mostly takes place in the town of (*) Motley Cow. A jester causes a tightrope walker to stumble and plummet to his death in this work’s prologue, during which the title character descends from a mountain. Like the author’s earlier *Gay Science*, this work explores the concept of eternal recurrence, and contains the phrase “God is dead.” The title figure of this work teaches people about the concept of the *ubermensch*. For 10 points, name this book by Nietzsche titled after the founder of Zoroastrianism.

ANSWER: Thus Spoke Zarathustra [or *Also Sprach Zarathustra*]

9. In the first act of *Coppelia*, Swanhilde dances a mazurka with a harvester, which provokes Franz to perform a dance from this country with the queen of the harvest. Martha Graham used music by a composer from this country to accompany a dance based on the image of a melancholy woman sitting on a bench; that is her *Lamentation*. In *The Great Dictator*, the barber shaves a man to the music of a piece based on a dance from this country. That G minor piece is the fifth in a set of (*) twenty-one pieces originally written for piano four-hands. The verbunkos is a military recruitment dance from this country, which is home to another dance that typically contains a slow lasso section and a fast friska section. The czardas originated in this country whose folk music inspired a set of 19 pieces by Franz Liszt and a set of “dances” by Brahms. For 10 points, name this country home to composers like Zoltan Kodaly and Bela Bartok.

ANSWER: Hungary

10. **The protagonist of this novel drops some bills in a well, prompting a woman to fish them out with a pole and exchange them for coins so that she can return the money to him. When the protagonist of this novel tries to return a note to his boss after a lecture, his boss laughs and tells him that he doesn't expect him to fulfill any of the ideals from their discussion. This novel's protagonist is at odds with a malicious hypocrite who has a deceptively effeminate voice and secretly visits a woman at the hot springs at night, a fact the protagonist uses when he plots his revenge. The protagonist of this novel receives an (*) inheritance after his parents die in his youth, and he is taken care of by a maid named Kiyo. This novel's protagonist befriends a colleague with a strong sense of justice nicknamed "Porcupine" and disdains an arrogant man named "Redshirt," who manipulates the principal. For 10 points, name this Soseki Natsume novel about a "young master" who becomes a math teacher.**

ANSWER: Botchan

11. **During this conflict, the one-armed British volunteer officer Ewen Cameron Bruce captured a fortified city using a single tank. Wilds Richardson oversaw the withdrawal of American troops from this conflict after a campaign that climaxed at the Battle of Bolshie Ozerki. Wilhelm von Mirbach and Hermann von Eichhorn were assassinated during this conflict as part of the Left SR Uprising. The Free Territory was an anarchist state active during this conflict that was controlled by Nestor Makhno's (*) Black Army. This conflict's theaters included the revolt of the Czechoslovak Legion, which took place with support from the Polar Bear Expedition. This conflict's losing side recognized the government of "Supreme Leader" Alexander Kolchak and employed generals like Anton Denikin and Pyotr Wrangel. For 10 points, name this war that was sparked by the October Revolution and ended with the victory of the communist Reds over the monarchist Whites for control of Russia.**

ANSWER: Russian Civil War

12. **One form of this technique uses calibration curves that rely on the Himmel-Squire method to determine the approximate spherical equivalents of random coils. Hayashi, Matsui, and Takagi developed another form of this technique that incorporates static LS, UV, and RI detectors as well as ASTRA multi-angle laser light scattering software. Fitting the data measured with this technique to the Mark-Houwink-Sakurada equation enables the calculation of polymer (*) molecular weights from intrinsic viscosities. Sephadex and Sephacryl are common matrices for this technique, which may use thyroglobulin or dextran blue as markers for calibrating the void volume. This technique can separate monomers from oligomers and folded from unfolded proteins because they have different hydrodynamic radii. For 10 points, name this type of chromatography in which larger molecules pass more slowly than smaller ones through a column of porous beads.**

ANSWER: size exclusion chromatography [or gel permeation chromatography; or gel filtration chromatography; or molecular sieve chromatography; prompt on "(column) chromatography"]

13. **In an essay by this author, a man recalls a story of how he was given a rapier and led to a chained bear, which he proceeds to fence with. That man created by this author also says that the title figures can dance without being hampered by gravity, as the force that pulls them into the air is stronger than the force that binds them to the earth. In one of this author's stories, a rape is omitted and merely represented with a dash in the text. In that story, the title character's father passionately kisses her mouth when they reconcile. In a play by this author, a secretary named (*) Licht discovers that the judge he works for is behind the central crime but is trying to frame Ruprecht. This author of "On the Marionette Theater" began a story with a woman posting a newspaper ad to determine the identity of her child's father. In a play by this author, Adam tries to hide from Eve the fact that he smashed the title object. For 10 points, name this German author of "The Marquise of O." and *The Broken Jug*.**

ANSWER: Heinrich von Kleist

14. **This psychologist worked closely with Eugene Gendlin to develop his "focusing" approach, a method by which one acquires inner awareness by identifying a "felt sense." This psychologist emphasized "experiential" over "rote" learning and included "realness" and "prizing" among the healthy attitudes needed for a good facilitator of learning. This author of *Freedom to Learn* formulated the notion of "encounter groups." This thinker laid out the principles of his primary framework in a set of (*) nineteen propositions. This psychologist defined "incongruity" as the gap between one's ideal self and one's real self, which is realized through a self-actualizing tendency. This pioneer of student-centered learning defined empathetic understanding and unconditional positive regard as cornerstones for an approach he described in *On Becoming a Person*. For 10 points, identify this psychologist who pioneered client-centered therapy.**

ANSWER: Carl Rogers

15. One of these concepts introduced by Trygve Reenskaug in the Smalltalk language gained popularity with Apple's WebObjects and is near-universal along with its MVVM variant for iOS applications. Another one of these concepts involves the use of double dispatch to traverse a structure made of polymorphic elements using an object known as a visitor. The web's first wiki accompanied a collection of documentation on these concepts known as the (*) "Portland repository" of them. This term was introduced in 1995 by Gamma et al.'s "gang of four," while Martin Fowler wrote the 2002 standard text on these concepts in "enterprise application architecture." Examples of these concepts include flyweight objects and model-view-controller architectures, and applying them without understanding them is sometimes known as "cargo cult programming." For 10 points, name these reusable architectures for common problems encountered in software engineering.

ANSWER: software design patterns

16. A 2013 experiment by Zou et al. measured a phenomenon named for this scientist using a silicon micromechanical chip. Odd functions of individual particle velocities satisfy this scientist's generalization of the Onsager reciprocal relations. The problem of finding S-matrix elements can be reduced to the problem of calculating traces of gamma matrices using this scientist's namesake (*) trick. He is the first alphabetical namesake of a phenomenon that implies a nonzero expectation value for baryon number in the chiral bag model of the nucleon and has magnitude per unit area of \hbar times speed of light times π squared, divided by 240 times separation distance to the fourth power. For 10 points, identify this scientist whose namesake effect can be observed in vacuum between two uncharged conducting plates.

ANSWER: Hendrik Brugt Gerhard Casimir [accept Casimir-Onsager reciprocal relations, Casimir trick, Casimir-Polder force, or Casimir effect]

17. During a riot in this country that climaxed in the delightfully named "clowns incident," Grant Cole and Marx Jones dropped flour bombs from a rented Cessna airplane. In response to the murder of Honorah Rieper, the Petone Incident, and other instances of perceived moral delinquency among this country's youth, its government mailed every household a copy of the Mazengarb Report. The term "applied Christianity" describes this country's cradle-to-the-grave welfare state, and was coined by its prime minister (*) Michael Joseph Savage. The names of two finance ministers from this country contribute to portmanteau terms for its free-market reforms in the 1980s and 90s. Those reforms, "Rogernomics" and "Ruthanasia," responded to a constitutional crisis caused by the Think Big policy of Robert Muldoon, who drew criticism for allowing the 1981 Springbok tour. For 10 points, name this country where French agents blew up the Greenpeace ship *Rainbow Warrior* in Auckland.

ANSWER: New Zealand

18. One of this author's poems describes a plantation as a place where "Stygian paintings light and shade renew pictures of hell, that Virgil's pencil drew." That anti-slavery work by this poet begins, "If there exists a hell the case is clear, [the title person's] slaves enjoy that portion here." In another work by this poet, a man says, "If that was purgatory, this is hell" about a location that is described as a "slaughter-house, yet hospital in name." Another of his works ends, (*) "And Reason's self shall bow the knee to shadows and delusions here." The speaker of that poem states, that "in spite of all the learned have said, I still my old opinion keep." This poet of "To Sir Toby" wrote a six-canto diatribe about his imprisonment on the HMS *Jersey*. He wrote that "the hunter still the deer pursues" in a poem inspired by a culture's practice of burying corpses sitting-down. For 10 points, name this poet of *The British Prison Ship* and "The Indian Burying Ground," the "Poet of the American Revolution."

ANSWER: Philip Freneau

19. One composer with this last name wrote a work subtitled "in imitation of Mr. Froberger." That composer with this name is credited with bringing the unmeasured prelude to the harpsichord. Another composer with this last name composed a piece that uses a quadruple-meter variant of the *romanesca* progression in the bassline and is in rondeau form. That work, entitled *The* (*) *Mysterious Barricades*, is in the second of the composer's four books of pieces for harpsichord he divided into 27 orders. A composer of this last name composed a grand trio sonata called *Le Parnasse, or the Apotheosis of Corelli*. The most famous composer to bear this name encouraged children to start learning to play music at the age of six or seven in his treatise *The Art of Harpsichord Playing*. That composer was known as "Le Grand" to distinguish him from his musical relatives. For 10 points, give this last name of Louis and François, whose "tombeau" was the title of a Ravel work.

ANSWER: Couperin [accept Louis Couperin or François Couperin]

20. **This god lifted a curse laid on one of his sons to prevent that son's feet from being eaten by worms. While this god was sleeping under the spell of Shilavati, one of his servants turned into a woman in order to spy on the *apsaras* in Devaloka. When this figure woke up and saw that servant arriving late for his duties, the servant turned back into a woman and the two of them had sex, leading to the birth of Sugriva. This god's wife deserted him and left behind a shadowy version of herself named (*) Chaya, but he tracked her down and they slept together in the form of horses, after which Dasra and Nasatya emerged from the wife's nostrils. Kunti used a boon granted by Durvasa to beget a son with this god. That son was raised by the charioteer Adhiratha and was born wearing invincibility-granting armor and earrings. This father of Karna is the husband of Saranyu and the father of the healer gods, the Ashvins. For 10 points, name this Hindu sun god.**

ANSWER: Surya

BONUSES

1. This lake is connected to the ocean by the San Juan river. For 10 points each:
[10] Name this lake that names a species of freshwater bull shark and includes the volcanic island Ometepe. While many historical attempts to build a canal through this lake failed, it is now the subject of a proposed “ecocanal” that would connect it to Puerto Limon.
ANSWER: Lake **Nicaragua**
[10] Lake Nicaragua is located just north of the border between Nicaragua and this country, a popular ecotourism destination. This country with capital at San Jose has not had a military since 1949.
ANSWER: **Costa Rica**
[10] This National Park, located on the Osa Peninsula in southwest Costa Rica, is one of the most biodiverse places on earth. It protects most of Central America’s remaining tapir population.
ANSWER: **Corcovado** National Park
2. The composer of this work said it was “dominated from beginning to end by a very human feeling of faith in eternal rest.” For 10 points each:
[10] Name this large-scale composition in D minor, the same key as Mozart’s version of the same type of work, composed by the teacher of Maurice Ravel.
ANSWER: Gabriel Urbain **Fauré**’s **Requiem** in D minor, Op. 48
[10] In lieu of a full *Dies Irae*, the fourth movement of Faure’s Requiem is a setting of this text taken from the final part of the *Dies Irae*. This movement is sung entirely by a solo soprano.
ANSWER: **Pie Jesu**
[10] Fauré made the most significant textual changes to this second movement of his Requiem. It opens with a B minor canon between the altos and tenors, and later features a baritone soloist.
ANSWER: **Offertoire** [or **Offertory**]
3. These two concepts title the first chapter of Bertrand Russell’s *Problems of Philosophy*, which asks if there is any knowledge in the world that we can be certain of. For 10 points each:
[10] Name these two concepts. Another British titled a book after these two concepts, defines one of the concepts as ordinary things, including physical objects and abstract notions that help us understand aspects of the second title concept.
ANSWER: **appearance** and **reality**
[10] *Appearance and Reality* was written by this philosopher, who was a leading thinker in the British idealism movement before it was effectively neutralized by Bertrand Russell and G.E. Moore.
ANSWER: Francis Herbert **Bradley**
[10] This other idealist argued that “to be is to perceive” in such works as *Treatise Concerning the Principles of Human Knowledge*. He claimed that reality was composed solely of ideas.
ANSWER: George **Berkeley**
4. This leader implemented Leszek Balcerowicz’s shock therapy policies before losing his country’s presidency in 1995. For 10 points each:
[10] Name this leader who had earlier faced down Wojciech Jaruzelski as the informal spokesman of the anti-government faction during the Round Table Talks.
ANSWER: Lech **Walesa**
[10] Lech Walesa came to prominence leading this Polish anti-communist trade union, first organized by workers at the Gdansk shipyards.
ANSWER: **Solidarity** [or **Solidarnosc**; or Independent Self-governing Trade Union “**Solidarity**”]
[10] The defining image of Solidarity’s 1989 parliamentary campaign was a poster using a repurposed still from this American movie. The poster showed the hero of this movie with the word “Solidarity” pinned to his chest and a ballot in his hand in the place of his gun.
ANSWER: **High Noon**

5. Answer questions about symbols that appear on the torso-shaped Jain emblem, for 10 points each:
 - [10] The bottom-most symbol consists of a hand with a wheel inside it and this Sanskrit word inside the wheel. This word translates as “non-violence.”
ANSWER: ahimsa
 - [10] Above the hand is this auspicious symbol common to many Asian religions. In Jainism, this symbol’s four arms represent the four states of existence.
ANSWER: swastika [or gammadion cross]
 - [10] Above the swastika are four dots, the topmost of which is inside a semicircle representing the dwelling-place of these beings. They possess the eight qualities of a soul that has freed itself from samsara and achieved moksha.
ANSWER: siddhahs

6. Examples of these devices include “whale-road” and “battle-sweat.” For 10 points each:
 - [10] Name these circumlocutions used in Old English poems, like *Beowulf*, that replace an ordinary noun with a more interesting, usually hyphenated epithet.
ANSWER: kennings
 - [10] This Irish poet updated the kenning for modern English in his faithful 1999 translation of *Beowulf*.
ANSWER: Seamus Heaney
 - [10] *Beowulf* begins with a brief description of the life and death of this legendary Spear-Dane king. His rise from foundling to ruler foreshadows the course of Beowulf’s life.
ANSWER: Shield Sheafson [accept either underlined portion]

7. These people’s creator god breathed into some stones to create a race of giants, but was displeased with the results and therefore turned some other stones into a second race of normal-sized people. For 10 points each:
 - [10] Name these people whose creation story involves the emergence of Viracocha from Lake Titicaca.
ANSWER: Incan mythology
 - [10] This figure’s three brothers Auca, Cachi, and Ucho all turned into stones while they were traveling to Cuzco, leaving this husband of Mama Ocllo to become the sole founder of the Incan Empire.
ANSWER: Manco Capac
 - [10] This Incan moon god created a fruit made out of his sperm that the virgin Cavillaca unknowingly swallowed, after which she turned herself and the resulting child into stones.
ANSWER: Coniraya

8. Proving that one of these theories exists and has a mass gap is a Millennium Prize problem. For 10 points each:
 - [10] Name this family of non-Abelian gauge theories based on compact semisimple Lie algebras.
ANSWER: Yang-Mills theories
 - [10] Yang-Mills theories incorporate these complex scalar fields due to the need to break gauge symmetry in order to preserve unitarity in the path integral formulation.
ANSWER: Faddeev-Popov ghosts
 - [10] Faddeev-Popov ghosts in Yang-Mills theories are anticommutative and therefore correspond to symmetries of these particles, which have half-integer spin.
ANSWER: fermions

9. During this process, many *gards* in Pomerania and Polabian Slavic territory were converted into towns governed by the Magdeburg Law and the Lübeck Law. For 10 points each:
 - [10] Name this process of German settlement east of the Saale and Elbe rivers, resulting in large-scale cultural and economic changes.
ANSWER: Ostsiedlung [prompt on descriptive answers]
 - [10] Many of the towns that developed during the *Ostsiedlung* joined this trade confederation that benefitted from its effective control over maritime trade in the North and Baltic Seas.
ANSWER: Hanseatic League [or Hansa]
 - [10] Sometimes, Slavic resistance caused rulers like Henry the Lion, a duke of this region, to conquer land violently. Augustus the Strong was Elector of this region before becoming king of Poland.
ANSWER: Duchy of Saxony [or Electorate of Saxony]

10. This functional group is reacted with strong base to give an alkene in the Bamford-Stevens reaction. For 10 points each:
 [10] Name this functional group, which is converted to an alkene through addition of butyllithium in the Shapiro reaction.
 ANSWER: tosylhydrazone
 [10] The related hydrazone functional group serves as an intermediate in this reduction of aldehydes and ketones to alkanes under basic conditions.
 ANSWER: Wolff-Kishner reduction
 [10] The Clemmenson reduction affects the same transformation as the Wolff-Kishner reduction, using a zinc amalgam and this strong acid. This acid is a component of aqua regia along with nitric acid.
 ANSWER: hydrochloric acid [or HCl]
11. This country's rulers included Imam Yahya and Ahmad the Devil. For 10 points each:
 [10] Name this no-longer-extant country where Gamal Abdel Nasser implemented a "long-breath strategy" that included the use of chemical weapons during a civil war that resulted in the fall of the Mutawakkilite Kingdom.
 ANSWER: North Yemen [do not accept "Yemen"]
 [10] North Yemen's eastern neighbor was a British protectorate named for this city, which has held a prominent position throughout history as a port for trading vessels entering and leaving the Red Sea via its namesake gulf.
 ANSWER: Aden
 [10] North Yemen formed a short-lived confederation with this equally short-lived country, which resulted from the union of the governments of Egypt and Syria in 1958.
 ANSWER: United Arab Republic [or UAR]
12. In a memorable sequence from this film, the protagonist and his friend painstakingly carry a car motor down a staircase and onto the back of his truck, but it slides off and breaks as the car moves forward. For 10 points each:
 [10] Name this 1978 Charles Burnett film about an African-American family living in Watts. It is interspersed with grim footage of the protagonist, Stan, working in a slaughterhouse.
 ANSWER: Killer of Sheep
 [10] *Killer of Sheep* is often interpreted as a critique of blaxploitation films, like this man's film *Shaft*. He was the first black staff photographer for *Life* magazine.
 ANSWER: Gordon Parks
 [10] Charles Burnett and Gordon Parks influenced this later African-American filmmaker. He directed *25th Hour* and *Do the Right Thing*.
 ANSWER: Spike Lee [or Shelton Jackson Lee]
13. At the end of this play, a man succumbs to his tuberculosis before his wife can tell him that she had really loved him, greatly upsetting the dying man's brother. For 10 points each:
 [10] Identify this play that begins with Robert about to set sail on a voyage. However, he abandons this plan when Ruth tells him that she loves him, prompting Robert's brother Andrew to leave on the boat instead.
 ANSWER: Beyond the Horizon
 [10] This American playwright of *Beyond the Horizon* described the struggles of the Tyrone family in *Long Day's Journey into Night*.
 ANSWER: Eugene O'Neill
 [10] This other O'Neill play, Richard sneaks out of his home to visit his girlfriend Muriel at night. Richard's parents encourage him to attend Yale in this only O'Neill comedy.
 ANSWER: Ah, Wilderness!
14. In these landforms, the equilibrium line separates the zone of ablation and zone of accumulation. For 10 points each:
 [10] Name these landforms that move via plastic flow and basal sliding. Their fracture zones may form crevasses.
 ANSWER: glaciers
 [10] In this process, glacial ice acts as a lever that lifts up whole pieces of bedrock called joint blocks and traps them inside the bottom of a glacier.
 ANSWER: plucking [or quarrying]
 [10] Rocks that become part of a glacier through plucking may later form this kind of material in which pebbles and gravel are surrounded by a uniform matrix of sand and silt. This material makes up the bulk of a terminal moraine.
 ANSWER: till

15. A dead, anthropomorphic, plucked chicken in the process of laying an egg hangs on the wall in a work by this man that shows his own head on a platter with a smoked herring. For 10 points each:
 [10] Name this Belgian painter who depicted Octave Maus and Edmond Picard as the title figures in *The Dangerous Cooks*. He is best known for his monumental *Christ's Entry Into Brussels*.
 ANSWER: James **Ensor** [or James Sidney **Edouard**, Baron Ensor]
 [10] The rejection of Ensor's *The Oyster Eaters* by the L'Essor group was one of the causes for the formation of this other group of Belgian artists, named for the number of its primary members.
 ANSWER: **Les XX** [or **Les Vingt**; accept **The Twenty**]
 [10] Though he was not an original member, this admirer of Seurat eventually joined Les XX. His take on pointillist technique can be seen in his *Beach at Heist*, which shows a yellow and pink sunset behind an oddly shaped cloud.
 ANSWER: Georges **Lemmen**
16. In Bertrand's model of this situation, firms set prices, while in Cournot's model of this situation, firms set the quantity sold. For 10 points each:
 [10] Name this economic situation in which a market is dominated by a small number of firms.
 ANSWER: **oligopoly** [accept **duopoly**]
 [10] In Bertrand's model, two identical firms will set their price equal to this value if they optimize their strategy. This is the value of the price in perfect competition.
 ANSWER: **marginal cost** [accept **MC**]
 [10] This value is a measure of the number of firms in relation to the amount of competition between them. It is calculated by summing the squares of each firm's market share.
 ANSWER: **Herfindahl**-Hirschmann index [accept **HHI**]
17. This author wrote her most famous work in response to the misogyny found in the *Romance of the Rose*. For 10 points each:
 [10] Name this female author attached to the French royal court who imagined building a city full of virtuous women in *The Book of the City of Ladies*.
 ANSWER: Christine de **Pizan**
 [10] De Pizan is believed to have based the stories found in the *Book of the City of Ladies* on this author's *On Famous Women*. He also wrote *The Decameron*.
 ANSWER: Giovanni **Boccaccio**
 [10] In Book I of *The City of Ladies*, this figure aids de Pizan and building the city's foundation. In the two other books, de Pizan is aided by her allies Rectitude and Justice.
 ANSWER: Lady **Reason**
18. This process consists of the light dependent and light independent reactions. For 10 points each:
 [10] Name this process performed by photoautotrophs that converts carbon dioxide and water into glucose and oxygen using light.
 ANSWER: **photosynthesis**
 [10] In C4 and CAM plants, the carbon fixation step of the light independent reaction occurs by the addition of carbon dioxide to this three carbon molecule via its namesake carboxylase.
 ANSWER: **PEP** [or **phosphoenolpyruvate**]
 [10] In the light dependent reaction, photosystem II uses the energy from sunlight to split water and transfer the electrons to this molecule, which then passes the electrons to the cytochrome proton pump.
 ANSWER: **plastoquinone**

19. For 10 points each, answer the following about African American migration to the West Coast during the early 20th century:

[10] The Great Migration of African Americans away from the South ramped up during the 1940s due to America's entrance into this war.

ANSWER: World War II

[10] This city's African American population grew out of the Kaiser shipyards, which produced many Liberty ships. In the 1960s, the Black Panther organization was founded in this city.

ANSWER: Oakland

[10] In 1944, 320 of this California harbor's mostly black dockworkers died in a munitions explosion caused by poor safety standards. The resulting government cover-up caused 50 of its employees to mutiny.

ANSWER: Port Chicago

20. The protagonist of this work returns to her home country after studying in Vienna. For 10 points:

[10] Name this autobiographical graphic novel by Marjane Satrapi about growing up during the rule of Ayatollah Khomeini.

ANSWER: Persepolis

[10] Satrapi's *Persepolis* is mostly set in this country, which is also the setting of Azar Nafisi's *Reading Lolita in Tehran*.

ANSWER: Islamic Republic of Iran

[10] In *Persepolis*, Marji looks up to this character, her uncle, who returns to Iran from the Soviet Union after the 1979 revolution. Marji begins to rebel after this character is executed by the government.

ANSWER: Uncle Anoosh