2016 "stanford housewrite"
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## PACKET 3

## TOSSUPS

1. In a photograph by this artist, sparsely vegetated hills appear behind a Sicilian peasant who uses a long stick to point out troop movements to a crouching soldier. Thousands of lost negatives taken by this photographer, Gerda Taro, and David Seymour were rediscovered in 2007, as documented in the film The Mexican Suitcase. A blurry photograph by this artist shows a black dog running alongside a woman, the only figure in focus, as she seeks shelter during an air raid. This artist famously stated, "If your pictures aren't good enough, you're not close enough." After a darkroom accident, only a few images (*) survived of the ones this artist took while wading past metal hedgehogs with the $1^{\text {st }}$ Infantry Division. Those images, known as The Magnificent Eleven, show Omaha Beach on D-Day. In this man's most famous work, a Spanish Loyalist drops his rifle and collapses backward as a bullet enters his head. For 10 points, name this Hungarian war photographer who created The Falling Soldier. ANSWER: Robert Capa [or Endre Friedmann; accept André Friedman]
2. This narrator of this story refuses to name his wife's former lover because "he was the childhood sweetheart, and what more does he want?" One character in this story buried his wife with half of a twenty-peso coin and kept the other half. This story's narrator asks whether that wife was a "Negro" because "Beulah" is "a name for a colored woman." In this story, the narrator's wife passes out on the sofa with her thigh exposed, but her husband chooses not to adjust her pink robe. One character in this story repeatedly lifts his beard and lets it fall and corresponds with the narrator's wife via (*) tape recordings. The central characters of this story share a joint after eating a large meal. While viewing a television program, this story's narrator fails to describe the title object and lets his guest, Robert, hold his hand while he draws it instead. For 10 points, name this Raymond Carver story about a couple who host a blind man who doesn't know what the title building looks like.
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ANSWER: "Cathedral"
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3. A work by this author ends with the protagonist standing among "rocks and the white cypress-trees hidden from all things" and offering to become one with the mist. One of this author's characters notes that "the oak tree and the cypress grow not in each other's shadow" in a speech that defines love as "a moving sea between the shores of your souls." The opening sentence of a book by this author calls that character "a dawn unto his own day" and "the chosen and (*) beloved." The sequel to this author's best-known work is framed as a conversation between the title character and his nine disciples in a garden. A book by this author is set "in the twelfth year, on the seventh day of Ielool." That book defines beauty as "eternity gazing at itself in a mirror," and states that "there are no graves here." The section "The Coming of the Ship" opens a work by this man in which the title character invites Almitra and others from Orphalese to ask him spiritual questions. For 10 points, name this author of The Prophet. ANSWER: Kahlil Gibran
4. One of these objects said to have been made on the twelfth day of the tenth month of the year 1279 CE is the subject of a controversy as to whether all others of its kind are mere copies. That example of these objects, a camphorwood tablet inscribed with Sanskrit and Chinese characters, is called the Dai-Gohonzon. The climax of the kechien kanjo ritual consists of throwing a flower at one of these objects while blindfolded. Components of these objects include the "fire of wisdom" and the Eight Great Charnel Grounds. The technique of scraping metal rods along (*) ridged funnels called chak-pur is used by Tibetan monks to create varieties of these objects from colored sand that they then destroy and disperse in a river. The Five Wisdom Kings and Five Wisdom Buddhas inhabit a connected pair of these objects that represent the Womb and Diamond Realms. For 10 points, name these meditation aids that symbolically depict the universe through geometric patterns.
ANSWER: mandalas [accept Dai-Gohonzon before mentioned]
5. The anti-CCP test and anti-MCV assay are methods of finding an antibody associated with this disease, and the PTPN22 gene can double a person's risk of getting this disease. The classification criteria for diagnosing this disease includes determining the prevalence of anti-citrullinated protein antibody, or ACPA. DMARDs are drugs which can be used to slow the progress of this disease. This disease is characterized by the presence of autoantibodies that are antibodies against the Fc regions of IgG. Those autoantibodies are this disease's namesake factor. This disease is associated with thickening of the (*) synovial membrane. This disease can be distinguished from a similar disease because it causes periods of stiffness that are typically longer than an hour. And unlike that other disease, the affected areas can turn hot and red and are actually inflamed instead of merely swollen. For 10 points, name this disease that causes inflammation of joints and is distinct from a similar "osteo-" disease. ANSWER: rheumatoid arthritis [or RA; do not accept or prompt on osteoarthritis; prompt on partial answer]
6. This country's currency dropped more than five percent against the dollar when its finance minister was sacked in December 2015 and replaced by an associate of the Gupta family, leading an opposition party to walk out of Parliament chanting "Zupta must fall." That anticapitalist, red-overall-clad party, the Economic Freedom Fighters, will participate in local elections for the first time in Spring 2016. The ex-wife and deputy of this country's president are fighting to succeed him as leader of the ruling party, which is a member of the $\left(^{*}\right.$ ) Tripartite Alliance along with this country's communist party and congress of trade unions. A protest movement against tuition fee raises that began in October 2015 in this country is known as \#FeesMustFall, a name inspired by an earlier movement directed at a statue at the oldest university in this country. For 10 points, name this country of Nhlanhla Nene, Julius Malema, and Jacob Zuma, where a statue of Cecil Rhodes was removed on April 9, 2015.
ANSWER: South Africa
7. In the last of a series of six interviews, this thinker distinguished between Maslow's peak experiences and Joyce's aesthetic epiphanies as part of a larger discussion about God and the idea of eternity. A four-part work by this thinker concludes with a volume titled after the "creative" form of the central concept, which progresses through stages like "the way of the seeded earth" and the "way of the celestial lights." This thinker was influenced by Adolf Bastian's distinction between "elementary ideas" and "folk ideas." This author drew the name for his most famous concept from the novel $\left(^{*}\right)$ Finnegans Wake. This thinker filmed a PBS documentary with journalist Bill Moyers at George Lucas' Skywalker Ranch. This author of The Masks of God used stages like "call to adventure" and "road of trials" to structure his most famous concept. For 10 points, name this man who described the "monomyth" in The Hero with a Thousand Faces.
ANSWER: Joseph Campbell
8. This organization's clashes with the Texas Rangers led to the Supreme Court case Medrano v. Allee. Miriam Pawel, author of a biography of a leader of this organization, wrote exposés about its use of a brainwashing technique originally developed by Charles Dederich, the leader of Synanon cult. That technique involved the encouragement of vicious criticism of peers in a group setting and was called "The Game." One of its major initiatives was centered around its headquarters at the Forty Acres complex, and was led by a man who hired the lawyer Jerry Cohen. This organization used the symbol of a black (*) eagle over a white circle on a field of red. It conducted the Modesto March after the election of Jerry Brown, leading to the passage of CALRA, and used a slogan that translates to "Yes, we can!" This labor union organized the Delano grape strike, and feuded with the Teamsters in the Salad Bowl strike. For 10 points, name this labor union led by Dolores Huerta and César Chávez. ANSWER: United Farm Workers of America [or UFW; or National Farm Workers Association; or NFWA]
9. After quitting his job as an overseas slave owner in China, this play's protagonist journeys to a madhouse in Egypt where all the residents believe him to be a wise emperor. This play opens as the protagonist fabricates a story in which he ends up riding on a reindeer's back after a failed hunting expedition. A button-molder in this play insists that he must melt the protagonist's soul unless he offers a list of sins, which leads that title character to confess his sins to a priest that turns out to be the devil. A mysterious voice that calls out to the title character several times throughout this play is known as the (*) "Boyg." The protagonist of this play shows a rare moment of melancholy when he returns home to witness the death of his mother, Ase. This play concludes after Solveig sings a lullaby to the dying title character, who confronts a Troll King earlier in the play. For 10 points, name this epic Henrik Ibsen play whose incidental music was composed by Edvard Grieg.
ANSWER: Peer Gynt
10. One of this composer's works has a major theme with two main components: slurred dotted quarter notes of pitches B-A and four slurred quarters of pitches $C \#$, $D$, up to $B$, A. That work ends with sandpaper blocks playing sixteenth notes over a hi-hat and woodblock beat. The first movement of another of this composer's works opens and closes with the brass and percussion playing repeated $E$ minor chords. The third movement of that work was inspired by this composer's dream about his daughter Emily, while the second was based on the legend of the $\left(^{*}\right)$ Fisher King. Those movements are "Meister Eckhardt and Quackie" and "The Anfortas Wound." This composer of Harmonielehre wrote a "foxtrot for orchestra" that was an "out-take" on one of his operas. That work, The Chairman Dances, is a companion to an opera with choruses like "The Eight Points of Attention" and "The Three Main Rules of Discipline." For 10 points, name this American composer of Nixon in China.
ANSWER: John Coolidge Adams
11. Interpretations of this painting as literature were popularized by an essay written by Goethe that argues that the fullness of the foliage of the trees in this painting relieve the sadness of the dying one. That essay describes this painting's artist as a poet. Ernst Scheyer has suggested that this work was commissioned by the family of Eliahu Montalto, the owner of the most prominent of the white objects in the lower right. The painter signed a stone slab engraved with a circle in the lower left of the Dresden version of this painting, which, unlike the Detroit version, does not include a snapped (*) tree that bends over a shallow stream. This moralizing landscape features a rainbow, representing hope, stretching into the scene at left. This work is arranged around the brown ruins of an old church, which looms over a row of sarcophagi located at Ouderkerk's Beth Haim. For 10 points, name this masterpiece by Jacob van Ruisdael that depicts the decaying landscape around the burying ground for a certain faith. ANSWER: The Jewish Cemetery
12. Roger of Barnaville was killed after being lured out of this city by a general who later ignored the defenders' charge so that he could finish a game of chess. A ruler of this city had clergyman Aimery of Limoges beaten, covered in honey, and exposed to insects at the top of a tower. This city, which was supplied by the port of St. Symeon, lost much of its power when Roger of Salerno's army was wiped out at Ager Sanguinis. Kerbogha of Mosul led a failed assault on this city, which had earlier been betrayed by the Armenian (*) Firouz. From 1153 to 1160 , this city was ruled, through marriage, by Raynald of Châtillon. The visions of Peter Bartholomew led to the discovery of the Holy Lance in this city during a siege that followed the defeat of Yaghi-Siyan. This city was taken by Godfrey of Bouillon and Bohemond of Taranto, the first ruler of this city's namesake Principality. For 10 points, name this ancient city named for the son of Seleucus Nicator, the site of the greatest clash of the First Crusade.
ANSWER: Antioch
13. A counterargument in this work uses the example of harmony and a lyre to suggest that the body can be tuned like an instrument. This work warns that we must not come to hate reasonable discourse, for just as people can become misanthropes, people can become misologues. This work posits that there are seen and unseen existences, arguing that the senses can only perceive that which is always changing, while that which is unchanging remains invisible to us. That idea is part of this work's affinity argument. This work argues that the body is an $\left({ }^{*}\right)$ impediment to a philosopher's well-being. This work is framed by a conversation between Echecrates and Xanthippe, and it posits that acquiring knowledge is merely an act of recollection. Cebes and Siminias are the chief interlocutors in this dialogue, which takes place after Crito and argues for the immortality of the soul. For 10 points, name this Platonic dialogue which culminates with Socrates' death by hemlock.
ANSWER: $\underline{\text { Phaedo }}$
14. One ruler of this kingdom invited hundreds of priests who opposed his taxation policies to a feast where they had to exit in single file through a narrow corridor, only to be strangled one by one as they left. The Jangama massacre took place in this kingdom, which was governed by Mark Cubbon for nearly thirty years during the period of its titular monarchy, which ended with the restoration of Chamarajendra X. The Wadiyar dynasty, which ruled this kingdom, shared the Kannada language with its predecessor state, Vijayanagara. Forces of this kingdom deployed iron-cased (*) rockets with attached blades to great effect at the Battle of Pollilur. A ruler of this kingdom owned a musical automaton that depicted a white man being killed by a tiger, which was among the treasures found in its capital, Seringapatam. For 10 points, name this kingdom in southern India whose rulers Haider Ali and Tipu Sultan fought four namesake wars against the British Empire during the 1700s.
ANSWER: Kingdom of Mysore
15. A woman from this country created an ideological program to help people develop "rounded personalities" and sponsored a massive jubilee to celebrate 1,300 years of its history. This country produced a clone of the Apple II computer called the Pravetz and promoted private ownership of small businesses under Decree 56. This country imprisoned the defendants of the Pastors' Trial in the Belene labor camp. The April Conspiracy targeted a leader of this country nicknamed "Bai Tosho." That leader carried out the unpopular (*) "Revival Process," which forced this country's Muslim minority to choose new names that sounded more Slavic, prompting his overthrow by Petar Mladenov. A dissident author from this country criticized its government via In Absentia Reports broadcast on Radio Free Europe, provoking his assassination via a ricin pellet fired from an umbrella. For 10 points, name this home country of Georgi Markov that was led by Todor Zhivkov from 1954 to 1989.
ANSWER: Republic of Bulgaria [or Republika Bǎlgarija]
16. When these systems incorporate only repulsive interactions, their phonon spectra do not exhibit an energy gap by the Hugenholtz-Pines theorem. An equation describing these systems has a one-dimensional soliton solution with value proportional to the hyperbolic tangent of "one over radical two times displacement over healing length". That equation describing these systems includes a coupling constant equal to "four pi times h-bar squared times scattering length over mass" and introduces a (*) nonlinear pseudopotential term into the Schrödinger equation under the Hartree-Fock approximation. In the dilute regime, the single particle wavefunction for one of these systems is given by the Gross-Pitaevskii equation. For 10 points, name this exotic form of matter consisting of supercooled atoms with integer spin that occupy the same quantum state.
ANSWER: Bose-Einstein condensates [or BECs; prompt on "Bose gases" or anything mentioning "bosons"]
17. Joseph Brodsky's poem about one of these animals in the Connecticut Valley ends with the image of children "swarm[ing] out of doors" and "crying with a loud shout in English, 'Winter's here!'" One of these creatures states that "there is no sophistry in my body" and claims it "took the whole of Creation to produce my foot" in a dramatic monologue. The speaker of a poem about these animals gives one "the lead gift in the twilight," though he would "sooner, except the penalties, kill a man than" (*) one of these animals. That poem exemplifies the poet's principle of inhumanism and notes how "the broken pillar of the wing jags from the clotted shoulder" of one of these birds. The wings of one of these birds "hold all creation in a weightless quiet," but "in his own time" it "meets the weather coming from the wrong way" and is "hurled upside down" by a storm. For 10 points, name these subjects of a Robinson Jeffers poem about "hurt" ones and a Ted Hughes poem about one "in the rain."
ANSWER: hawks [prompt on birds]
18. A method to remove sidebands in this technique applies a series of $\mathbf{1 8 0}$ degree pulses prior to data collection and is called TOSS. Heteronuclear couplings can be measured using an application of this technique called SEDOR, though REDOR is much more commonly used today. One constant important to this technique is proportional to one over r-cubed times gamma-sub-s times gamma-sub-I, where gamma is the gyromagnetic ratio; that constant is the $\left(^{*}\right)$ dipolar coupling constant. Dipole-dipole interaction in this technique leads to broadened lines in spectra relative to those in a different technique where that interaction averages to zero. A variety of this technique orients the sample at an angle of three cosine squared theta minus one relative to the magnetic field. For 10 points, name this technique which often orients samples at 54.74 degrees in its magic angle spinning variety and which exhibits chemical shift anisotropy, unlike solution-phase NMR.
ANSWER: solid-state $\underline{\text { Nuclear Magnetic } \underline{R}}$ esonance spectroscopy_[prompt on NMR before mentioned; anti-prompt on magic angle spinning or MAS NMR before mentioned]
19. This goddess led an army against a ghostly owl and a giant who could turn into a dragon. This goddess lives in a place whose name means "house of ferns." When a mortal man rejected this figure' advances, she turned him and his lover each into one half of a whole flower. This goddess encountered a lover during an out-of-body experience and then sent an expedition to find him. Because that expedition took over forty days, this goddess angrily destroyed a grove of trees belonging to the expedition's leader. An attempt to rape this figure was broken off when the assailant, a shapeshifter with the ability to turn solid rock into fertile earth, went to search for the (*) detachable vagina of the sorceress Kapo. While being pursued by her sister Namaka, this goddess carried her youngest sister under her armpit in the form of an egg and dug many craters in order to find the Navel of the World. For 10 points, name this Hawaiian sister of the hula goddess Hi'iaka who lives in the caldera of Kilauea.
ANSWER: Pele
20. Edward Herrick, a librarian at Yale, suggested that this object be identified with one supposedly observed by Wartmann. Adolf Petersen and Sears Walker independently precovered this object in Lalande's Histoire céleste française, while the Lazzaroni network of American astronomer Benjamin Peirce argued that the discovery of this object was a "happy accident." Nicholas Kollerstrom argues that George (*) Airy took an unreasonable share of blame for the British loss in the race to confirm this object's existence. William Lassell discovered a satellite of this object just 17 days after Heinrich d'Arrest assisted in its discovery. The subject of two independent solutions to the inverse perturbation problem, name this celestial object about which Johann Galle wrote in 1846 to Urban Le Verrier "monsieur, the planet of which you indicated the position really exists."
ANSWER: Neptune

## BONUSES

1. Nathan Bedford Forrest escaped from this fortification with his men in the middle of the night, angrily stating "I did not come here to surrender my command." For 10 points each:
[10] Name this Tennessee fort surrendered to the Union by Simon Bolivar Buckner in February 1862. The Union commander whose forces captured this location was celebrated by the press for his demand of an "Unconditional Surrender."

## ANSWER: Fort Donelson

[10] This General's successful siege of Fort Donelson brought him to the attention of Abraham Lincoln. He ended the war as the commanding general of the entire Union army.

## ANSWER: Ulysses S. Grant

[10] While supervising the Western theater of the Civil War, Grant issued General Order No.11, which would have ordered this action if it had ever been actually executed. Grant's stated reason for ordering this action was to suppress the black market cotton trade.
ANSWER: expel the Jews [accept any answer that suggests expelling all Jews from Tennessee, Mississippi and/or Kentucky]
2. In this technique, an impure compound is dissolved in hot solvent, generating a saturated solution which is then allowed to cool. For 10 points each:
[10] Name this technique, where in the most typical situation the desired pure product crashes out of the saturated solution as it cools due to the pure compound's decreased solubility at lower temperatures relative to the impurities. ANSWER: recrystallization [prompt on crystallization]
[10] To remove colored impurities, a small amount of this substance can be added to the hot solution. The solution is then stirred and filtered hot to remove this substance.
ANSWER: activated charcoal [or activated carbon; or activated coal; accept decolorizing in the place of activated; prompt on incomplete answers]
[10] After the pure compound crystallizes out of solution, it can be collected on filter paper by drawing the solution and solid through a Büchner funnel using this type of pump. When operating in the ultra-high regime, this type of pump can generate pressures as low as one nanotorr.
ANSWER: vacuum pump [accept suction pump]
3. In Sufjan Stevens' "Flint (For the Unemployed and Underpaid)," a trumpet plays two of these musical phrases in the key of F as a musical interlude between the second and third verses. For 10 points each:
[10] Name these eight-part sets of notes, which in the key of C consist of, in order, C-D-E-F-G-A-B-C. Those notes are all introduced one by one in the song "Do-Re-Mi" from The Sound of Music.
ANSWER: major scales [prompt on "scales"]
[10] This Vampire Weekend song opens with a G major scale played on the bass. The speaker of this song describes a "cruel professor studying romances" and asks, "How am I supposed to pretend I never want to see you again?"
ANSWER: "Campus"
[10] The guitar modulates from a C major scale to an F major scale in the buildup to the chorus of this David Bowie song, which was famously covered by Nirvana. It opens, "We passed upon the stair, we spoke of was and when."
ANSWER: "The Man Who Sold the World"
4. This country carried out Operation Gordian Knot against FRELIMO in Mozambique. For 10 points each:
[10] Name this country that fought several simultaneous wars against independence movements in its African colonies between 1961 and 1974, ultimately ending with the fall of its government in the Carnation Revolution. ANSWER: Portugal
[10] Along with Holden Roberto's FNLA and Agostinho Neto's MPLA, this organization led by Jonas Savimbi fought against Portugal during the Angolan War of Independence.
ANSWER: UNITA
[10] In Operation Green Sea, Portugal invaded this country, which is not one of its former colonies, in an attempt to capture the rebel leader Amilcar Cabral. This country imprisoned dissidents in the Camp Boiro National Barracks. ANSWER: Guinea-Conakry [do not accept "Guinea-Bissau"]
5. This anthropologist used the phrase "everyday communism" to describe interactions in which people in society help each other without expecting anything in return.
[10] Name this British anthropologist who called the title phenomenon the "oldest form of trade" in his book Debt: The First 5000 Years. He is credited with coining the term "we are the 99 percent."
ANSWER: David Graeber
[10] This anthropological text devotes several chapter to debt and social obligation, including one titled "Repaying One-Tenthousandth." This book distinguishes between shame and guilt cultures and was written by Ruth Benedict.
ANSWER: The Chrysanthemum and the Sword
[10] David Graeber got his PhD under the supervision of this anthropologist who used the term "original affluent society" to describe hunter-gatherers.
ANSWER: Marshall Sahlins
6. Some examples of this type of work are Que vous madame / In pace and A la mort / Monstra te esse matrem. For 10 points each:
[10] Name this type of work in which the lowest voice sings a sacred text in Latin and the two upper voices sing a secular text. It is so named because it combines aspects of two other musical forms.
ANSWER: motet-chanson
[10] The earlier-mentioned examples of the motet-chanson were composed Josquin de Prez, who is also known for composing these settings of the ordinary of the Eucharist.
ANSWER: masses [or missa]
[10] The motet-chanson is distinguished from a regular chanson because its lowest voice functions as one of these. These pre-existing melodies were used as the foundation of polyphonic compositions, and the most popular one used in masses was L'homme Armé.

7. The vertical cavity surface emitting variety of these devices is a key component of data centers. For 10 points each: [10] Name these devices that most commonly use a semiconductor diode or a doped crystal as the gain medium in which stimulated emission occurs.
ANSWER: lasers
[10] Passive mode-locked lasers may use a lens that exhibits the AC type of this effect to provide self-focusing. The DC type of this effect involves a change in refractive index proportional to the square of the applied electric field.
ANSWER: Kerr effect
[10] This phenomenon occurs when the gain of a laser saturates at certain frequencies due to induced inhomogeneity in the absorption spectrum or to the formation of a standing wave interference pattern in the resonant cavity.
ANSWER: spectral and/or spatial hole burning
8. This country produced a Coca-Cola knock-off called Vita Cola. For 10 points each:
[10] Name this country whose second-rate consumer goods are nostalgically remembered through "ostalgie." It policed its citizen with the Stasi, and separated itself from its capitalist western neighbor by building an "AntiFascist Protective Wall."
ANSWER: East Germany [or German Democratic Republic; or Deutsche $\underline{\text { Demokratische Republik] }}$
[10] Fans of "ostalgie" often drive replicas of this East German car model, which was made cheaply out of plastic and an obsolete two-stroke engine.
ANSWER: the Trabant [or the Trabi]
[10] Organizations of this type sponsored by the East German government include one named for Ernst Thalmann and the FDJ. The early 20th century Wandervogel movement popularized these organizations in Germany.
ANSWER: youth groups [or boy scouts; or girls scouts; accept logical equivalents]
9. In one story from this collection, a Roman emperor named Maxen Wledig has a dream about a beautiful woman in a distant land, then returns to Rome with that woman's brothers Kynan and Adeon to defeat a usurper. For 10 points each:
[10] Name this collection of Welsh stories that contains the Four Branches, which are interconnected by the figure of Pryderi. Other characters in this collection of myths include Pwyll, Rhiannon, and King Arthur.
ANSWER: Mabinogion
[10] This aristocrat created a pioneering English translation of the Mabinogion in the $19^{\text {th }}$ century. Her translation is often mistakenly credited with introducing the name mabinogion, even though the word mabinogi is already plural. ANSWER: Lady Charlotte Guest
[10] Much of the content of the Mabinogion is derived from the White Book of Rhydderch and this other colorfully named manuscript. This manuscript is also a major source of Gogynfeirdd poetry.
ANSWER: Red Book of Hergest
10. Answer some questions about how Catholics celebrate the Christmas season, for 10 points each:
[10] The liturgical colors change to violet and rose for this four-week period that immediately precedes Christmas. ANSWER: Advent
[10] In this country, the sighting of the Star of Bethlehem on Christmas Eve precedes a traditional supper called Wigilia and a unique type of Midnight Mass called Pasterka.
ANSWER: Poland
[10] This feast day immediately follows the Twelve Days of Christmas and begins the next liturgical season. This feast day commemorates the visit of the Magi and the baptism of Jesus in the Jordan River.
ANSWER: Epiphany [or Theopany; or Three Kings Day]
11. The expression of Lefty, nodal, and pitx2 signaling proteins is key to the asymmetric development of this structure. For 10 points each:
[10] Name this human organ that forms from the looping of a namesake "tube" in the embryo.
ANSWER: human heart
[10] Despite the name, the cardiac complex of this group of embryonic cells does not form the cells of the heart, but instead the connective tissue around the heart. This tissue also gives rise to melanocytes, cartilage, and glial cells.
ANSWER: neural crest
[10] The neural crest is located between the neural tube and this outermost germ layer of the early embryo. The nervous system and epidermis originate in this layer.
ANSWER: ectoderm
12. In the appendix of the novel she appears in, a librarian discovers a photo of this character sitting with a German general. For 10 points each:
[10] Name this woman who angers her brother by having sex with Dalton Ames. One of her brothers remembers seeing a stain on her underwear as she climbed a tree to spy on their grandfather's funeral.
ANSWER: Caddy Compson [or Candace Compson; prompt on "Compson" alone]
[10] Caddy is remembered by her brothers Benjy, Quentin, and Jason in this William Faulkner novel.
ANSWER: The Sound and the Fury
[10] Faulkner's appendix to the Sound and the Fury enigmatically describes this character with the simple statement "they endured." This character is the last to be described in the appendix.
ANSWER: Dilsey [or Dilsey Gibson]
13. This painter's visit to an industrial town in Upper Silesia inspired a painting sometimes called Modern Cyclopes, in which several men hold full-sized tongs wide open to grab a glowing metal at center. For 10 points each:
[10] Name this artist of The Iron Rolling Mill who is more famous for depicting a Prussian king in front of a music stand while surrounded by aristocrats and musicians in Flute Concert of Frederick the Great at Sanssouci. ANSWER: Adolph Menzel [or Adolph Friedrich Erdmann von Menzel]
[10] Adolph Menzel was, like Caspar David Friedrich, an artist important to the culture of this modern-day country, which was also home to the Düsseldorf School.

## ANSWER: Germany

[10] This German Romantic movement adhered to moral or Biblical themes in painting. It included Johann Friedrich Overbeck, who allegorized Italy and Germany as two seated women holding hands, and Peter von Cornelius.
ANSWER: Nazarene Movement [accept Brotherhood of St. Luke or Lucas Brotherhood]
14. This author asked the addressee of one poem "do you recall those days of mortal life, when beauty sparkled in your quick and gleaming eyes." For 10 points each:
[10] Name this Italian poet of "To Silvia" who wrote, "And into this immensity my thought sinks ever drowning, and it is sweet to shipwreck in such a sea" at the end of "The Infinite," a poem included in his Canti.

## ANSWER: Giacomo Leopardi

[10] In a Leopardi poem titled for this character "minore," he is "exhausted, wet with brother's blood alone...in the dismal night." The poem ends with this man's declaration, "And let my wretched corpse the lightning blast, the wilde beast tear; and let my name and memory melt in air!"
ANSWER: Brutus
[10] This other Italian poet imagined Brutus feet-first in the mouth of Lucifer, one of the many fun things he sees with Vergil as he tours hell in the first part of his Divine Comedy.
ANSWER: Dante Alighieri
15. Some proofs of this theorem, which is also known as the sequential compactness theorem, invoke the monotone convergence theorem. For 10 points each:
[10] Name this theorem in real analysis that states that every bounded sequence in Rn has a subsequence that converges.
ANSWER: Bolzano-Weierstrass theorem
[10] One proof of the Bolzano-Weierstrass theorem uses a sequence of these constructs. Their namesake theorem says that if these constructs are closed and bounded, then their intersection is nonempty.

## ANSWER: nested intervals

[10] Bernard Bolzano first proved the Bolzano-Weierstrass theorem in proving this other theorem, which states that a continuous function F on the interval $[\mathrm{a}, \mathrm{b}]$ will take on any value between $\mathrm{F}[\mathrm{a}]$ and $\mathrm{F}[\mathrm{b}]$ at some point on $[\mathrm{a}, \mathrm{b}]$.
ANSWER: intermediate value theorem
16. At the beginning of an essay, this philosopher described a yellowish "after-image" and argues that seeing the afterimage is not itself a brain process, but rather the reporting of a brain process. For 10 points each:
[10] Identify this Australian philosopher who authored "Sensations and the Brain Process" and originated mindbrain identity theory with Ullin Place.
ANSWER: John Jamieson Carswell Smart
[10] A common objection to J.J.C. Smart's identity theory is this thesis, which states that mental states can be implemented in different kinds of systems, even if they don't have a brain. Jerry Fodor is a proponent of this thesis.
ANSWER: multiple realizability
[10] Another proponent of multiple realizability is Hilary Putnam, who names an indispensability thesis about mathematical entities with this author of Word and Object and Two Dogmas of Empiricism.
ANSWER: William Van Orman Quine
17. In her essay "Nostalgia of the Body," this artist set forth the principles of her Neo-Concretist movement, which saw the work of art not as a "machine" or "object," but rather as an "almost-body." For 10 points each:
[10] Name this Brazilian artist of a series of hinged aluminum sculptures that can be folded, turned, and oriented in various combinations, called Bichos. She also proposed running scissors along a Möbius strip for her Trailings.

## ANSWER: Lygia Clark

[10] Numbers 1-0 is a set of painted aluminum sculptures, each shaped like a different numerical digit, by this artist. He is more famous for his $L O V E$ sculptures, which stack the word's four letters, with a slanted "O" in a square.
ANSWER: Robert Indiana
[10] A tiny aluminum figurine called Fallen Astronaut, created by Paul Van Hoeydonck, is located on the surface of this location. Along with a commemorative plaque, it was left on this location by the Apollo 15 crew.
ANSWER: the Moon
18. This work begins with the commands "Traveller, you must set out / at dawn. And wipe your feet upon / the dog-nose wetness of the earth." For 10 points each:
[10] Name this poem whose second stanza deals with the "death of dawn's lone trumpeter" in "Cascades / Of white feather flakes." It ends with the speaker asking "is this mocked grimace / this closed contortion - I?"
ANSWER: "Death in the Dawn"
[10] "Death in the Dawn" is a work by this man. He penned the collection A Shuttle in the Crypt and collected some of his writings from prison in the memoir The Man Died.
ANSWER: Wole Soyinka
[10] In this Soyinka play, the British Simon Pilkings prevents Elesin from committing ritual suicide, which ends catastrophically when Elesin's son Olunde elects to take his place.
ANSWER: Death and the King's Horseman
19. During this war, papal legate Arnaud Amalric reportedly ordered his soldiers to "kill them all for God will know His own" prior to massacring essentially all of the inhabitants of Béziers. For 10 points each:
[10] Name this religious conflict portrayed in Emmanuel Le Roy Ladurie's microhistory Montaillou, which was put together by Innocent III to stamp out the Cathar heresy in southern France.
ANSWER: Albigensian Crusade [prompt on Cathar Crusade]
[10] This city in the Languedoc, known for its massive walled fortress, was a major stronghold for the Cathars until its viscount, Raymond-Roger Trencavel, capitulated under siege in 1209.
ANSWER: Carcassonne
[10] This Russian-French historian wrote about one of the final Cathar holdouts in her book Massacre at Montségur. She also wrote The World Is Not Enough, The Cornerstone, and Destiny of Fire, which are all about medieval France.
ANSWER: Zoé Oldenbourg
20. In this play, the Duke of Brachiano falls in love with Vittoria, so they decide to murder their spouses. For 10 points each:
[10] Name this play that begins with Count Lodovico's banishment from Rome. He later returns and vows revenge on Brachiano and Vittoria because he had loved Isabella.
ANSWER: The White Devil
[10] This Jacobean playwright of The Devil's Law Case penned The White Devil and wrote about a woman who secretly marries Antonio in The Duchess of Malfi.

## ANSWER: John Webster

[10] Vittoria and Brachiano are aided in their schemes by this brother of Brachiano. At the end of the play, Vittoria and her maid Zanche shoot this man instead of shooting each other, but he survives because the guns aren't loaded.
ANSWER: Flamineo

