Fall Open 2019
Written by Itamar Naveh-Benjamin, Jason Golfinos, Aseem Keyal, Jonathen Settle, Kenji Shimizu, Klaus Llwynog, Jack Mehr, Samir Khan, and Nick Collins

Tossups

1. **Some shamans among these people burn their toe joints with a red-hot rock so they can dislocate them to fit namesake shoes. W. E. H. Stanner argued that these peoples' religion combines "rite-less myths" with "myth-less rites" and said they were subject to a "Great Silence." Double stone circles called** *bora* **were often used in these people's initiations, which tended to involve tooth or thumbnail removal. These people believe that shamans called** *kurdaitcha* **can kill people just by pointing a bone at them. The** (*) *coroboree* is a sacred dance for these people. Durkheim used the *tjurunga*, a totem of these people also used as a bullroarer, as a prototype of the sacred item. "Temporary mobility" has replaced the often derogatory term "walkabout" to refer to one of these people's rites of passage. One of their sacred sites forms a national park with the similar Kata Tjuta ("CHOO-tah"). These people organize their beliefs and geography with "songlines." For 10 points, name these people, who hold Uluru ("OOH-loo-roo") sacred.
ANSWER: Australian **Aborigine**s [or Australian **Aboriginals**; anti-prompt on any specific group; prompt stupidly generously on **Australia**ns; accept **Torres Strait** Islanders, one supposes]
<JG, Religion>

2. **A narrator who goes by this name brazenly violates the anonymity of Olga Olegovna Orlova, explaining that her "egg-like alliteration" would've been a "pity to withhold." In a poem with this title, the speaker considers how "Wordsworth built church organs" and "Byron tanned luggage / cowhide" as he walks past a funerary obelisk graffitied with the word "SHIT." A character who goes by this name investigates the author of** *The Doubtful Asphodel,* **only to realize that it's actually him, in Vladimir Nabokov's novel** *The Real Life of Sebastian Knight.* **An** (*) Arthur Scargill quote prefaces an obscene poem with this title written by Tony Harrison. In a novel with this title, the elderly Herbert Stencil hires an alligator-hunting member of the Whole Sick Crew named Benny Profane to help him track down the title mysterious woman. For 10 points, Thomas Pynchon's debut novel is titled for which letter of the alphabet?
ANSWER: **V**. [accept "**V**" or **V**.]
<INB, Miscellaneous Lit>

3. **A representative of one of these places embarked on an embassy to Rome, where he fell into a sewer on the Palatine Hill and broke his foot. One of these places was generously sponsored by Flavia Melitene, who commissioned an enormous statue of Hadrian situated at its center. Gaius Asinius Pollio used the spoils from his campaign against the Parthini Illyrians to establish one of these places in Rome. One of these places that contained inscriptions describing it as "the place of the cure of the soul" greatly benefitted when a ruler nicknamed "the** (*) Benefactor" ordered that certain objects be seized from ships and replaced by copies. Eumenes II constructed one of these places that housed some 200,000 objects. The contents of one of these places were listed in the now-lost *Pinakes* ("PIN-uh-keez") of its resident scholar, Callimachus ("cal-LIM-uh-cuss"). For 10 points, Pergamon and Alexandria were home to large examples of what sort of institutions that housed collections made of parchment and papyrus?
ANSWER: **libraries** [accept the **Library** of Pergamon or the **Library** of Alexandria; accept grammarian **school**s until "Flavia Melitene"]
<INB, European History (Commonwealth, Ancient, Historiography)>

4. **ARPES ("AR-pezz") studies of this metal's selenide revealed a surprising lack of hole pockets at the Fermi surface. Lanthanum and oxygen layers alternate with layers of this metal and arsenic in the first of the 1111-type materials to be discovered. The alpha allotrope of this metal is the first metal above the** *x*-axis of the

Bethe-Slater curve. Pnictides ("NICK-tides") of this element are high-temperature superconductors with T-sub-c's below that of cuprates. Suspensions of nanoscale compounds containing this element are used to dissipate thermal energy and damp coil movement in (*) loudspeakers. Since it has a long-lived excited state, this metal is used as a gamma ray emitter in the standard setup for Mossbauer spectroscopy that pairs this metal with cobalt. One type of rare-earth magnet is made from an alloy of neodymium, boron, and this metal. For 10 points, name this metal that lends its Latin name to a phenomenon in which all magnetic moment align.
ANSWER: **iron** [or **Fe**; accept **ferrum**]
<JS, Physics>

5. **Museums on the husbandry of this animal are located at Soufli in Greece and Macclesfield in the United Kingdom. In mid-1800s France, many of these animals were inflicted with speckled brown dots and suffered from lethal diarrhea, due to epidemics of pébrine ("peh-BREEN") and flacherie ("flah-shuh-REE"). In January 2019, the spacecraft Chang'e 4 ("chang-uh four") took this animal and several plants to the moon to study photosynthesis there. This animal is boiled in soy sauce in the delicious Korean street food (*)** *beondegi* ("BUN-day-ghee"). This domesticated member of the genus *Bombyx* ("BOM-bicks") has consequently lost its wings and pigmentation, and is now dependent on us humans to reproduce. Justinian I ("the-first") started the Byzantine sericulture industry when he ordered two Nestorian monks to smuggle these insects along with their favorite food, the white mulberry. For 10 points, name this insect whose cocoon produces a valuable textile.
ANSWER: domesticated **silkworm** [or domesticated **silkmoth** or _**Bombyx mori**_; or **silkworm pupa**; accept **wild silkworm** or **wild silkmoth** or _**Bombyx mandarina**_ before "domesticated"; prompt on moth or Lepidoptera]
<KL, General Knowledge>

6. **Edwin Wilmsen's *The Land Filled With Flies* attacks scholars who treat this region's people as "isolates" and not as marginalized groups, sparking rancorous debates with Richard Borshay Lee. A people in this region use a healing power termed *n/um* ("num") to cure "star sickness," as told by the informant "Nisa" in ethnographies on it by Marjorie Shostak. Sheila Coulson spuriously claimed to have found "the world's oldest ritual" in this region's Tsodilo Hills. People in this region "insult the meat" brought by young hunters in a classic example of (*)** band society leveling mechanisms. It's not in Australia or Tierra del Fuego, but residents of this region home to the Ju|'hoansi ("zhoo-TOH-an-see") "lived in a kind of material plenty" in an article arguing that the "Zen strategy" of having few material wants lets peoples like this region's !Kung ("kung") people live on five-hour work days. For 10 points, Marshall Sahlins argued that what region's San people are among "The Original Affluent Societies"?
ANSWER: **Kalahari** Desert/Basin [accept **Kgala**gadi or translations thereof like "Place of **Great Thirst**" or "**Waterless** Place"; prompt on Southern Africa; prompt on Botswana; anti-prompt on more specific areas of the Kalahari like the Okavango if that somehow is relevant]
<JG, Anthropology>

7. **The sinking of a Swedish ship by Italian planes is described in a book by Marcel Junod about his time with this group. In the documentary *A Visitor from the Living*, Claude Lanzmann interviews a representative of this group named Maurice Rossel. The "Committee of Five" that initially led this group included a general who led the effort against the Sonderbund. This group initially refused to condemn Nazi atrocities during the post-World War II leadership of Carl Burckhardt, and was fooled by an (*)** SS cover-up into making an inaccurate report on conditions in the Theresienstadt ("TER-uh-zeen-sh'TAHT") Ghetto. The Swedish branch of this group cooperated with the Danish government during the White Buses operation. Frédéric Passy was jointly awarded the first Nobel Peace Prize with the founder of this group, who recounted the reasons for its establishment in *A Memory of Solferino*. For 10 points, name this group founded by Henry Dunant ("d'yoo-NAHN") whose American branch was founded by Clara Barton.
ANSWER: **Red Cross** [or International Committee of the **Red Cross**; or **ICRC**]
<KS, European History (Continental)>

8. **In his discussion of a painting set in this city, Giovanni Bellori highlighted the artist's inclusion of out-of-season pomegranates. Milan's Brera Gallery houses an artist's second version of a painting set in this city, which differs from the first in its inclusion of an elderly maid carrying a tin tray of ribs. A painting titled for this city was celebrated by Abraham Bredius as Vermeer's masterpiece, but was later revealed to be a forgery made by Han van Meegeren ("MAY-gren"). According to Robert Hughes, several elements of a painting set in this city "seem ready to come off the canvas," especially "the basket of (*)** fruit, perched on the very brink of the painted table and ready to spill its contents." In that painting set in this city, a man with a scallop shell affixed to his tunic reaches with one of his outstretched arms towards Jesus, who appears at its center blessing a piece of bread. For 10 points, identify this Biblical city that provides the setting of a *Supper* painted by Caravaggio.

ANSWER: **Emmaus** [accept *The Supper at **Emmaus***]

<INB, Painting and Sculpture>

9. **In her translation of a poet from this country, Alissa Valles rendered the "monotonous" voice of Marsyas ("MAR-see-us") as the "single vowel / A." That poet from this country created a glutton with a double chin who "studies his face in the mirror," and last appears in *Epilogue to a Storm*. A poet from this country who "always aspired to a more spacious form" proposed that poetry should only be written "rarely and reluctantly, under unbearable duress" in his "Ars Poetica." This country was home to a poet who created the (*)** Descartes-inspired Everyman "Mr. Cogito," as well as to a poet who translated his collection *Unattainable Earth* into English with the help of his colleague at UC Berkeley, Robert Hass. This country's Nobel Prize winners include a poet who wrote about a "Nonexistent Himalayan Expedition" in *Calling out to Yeti*, and the author of *The Captive Mind.* For 10 points, name this country home to Zbigniew ("z'BIG-nee-yeff") Herbert, Wisława Szymborska ("vis-WAH-vah shim-BOR-skah") and Czesław Miłosz ("CHESS-waf MEE-wosh").

ANSWER: **Poland** [or Republic of **Poland**; or Rzeczpospolita **Polska**]

<INB, Non-epic Poetry>

10. **This composer used the tempo marking "Éclatant, lumineux" ("ay-klah-TAHN, l'yoo-mee-NUH") at the climax of a dissonant 9/8-time ("nine-eight-time") piece originally intended to be part of a Piano Sonata No. 11. In his one-movement Piano Sonata No. 5, an introduction marked "Allegro impetuoso con stravaganza" leads into a 5/8-time ("five-eight-time") Languido passage. This composer's Opus 11 is a set of preludes in the exact same order of keys as Chopin's preludes. The three movements of his Symphony No. 3 are titled *Luttes* ("L'YOOT"), *Voluptés* ("vo-l'yoop-TAY"), and *Jeu divin* ("zhuh duh-VAN"). His piano pieces have idiosyncratic tempo markings such as Affannato and (*)** Patetico, the latter belonging to his Op. 8 Etude in D-sharp minor. This composer's theosophic influences are seen in later pieces such as *Vers la flamme* ("vair lah FLAHM"), *The Poem of Ecstasy*, and the *Black Mass* and *White Mass* sonatas. For 10 points, name this mystic apocalyptic synesthetic Russian composer.

ANSWER: Alexander **Scriabin**

<KL, Classical Music and Opera>

11. **This man is the alphabetically *prior* namesake of a number theoretic technique for bounding sums by writing them as integrals over the unit circle and then distinguishing between major and minor arcs. Applying that technique named for this man to the von Mangoldt function gives a proof of Vinogradov's theorem. This man is the alphabetically *prior* namesake of an operator that takes a function and returns the maximum average value of that function on balls centered at a given point. That operator named for this man is used to prove the (*)** Lebesgue ("luh-BEG") differentiation theorem. This man is the alphabetically *prior* namesake of a pair of conjectures, one of which generalizes the twin prime conjecture to give exact asymptotics. This frequent collaborator with J. E. Littlewood took a taxi with the number 1729 to see Srinivasa Ramanujan

("sh'REE-nee-vah-sah rah-MAH-noo-jan") in the hospital. For 10 points, name this author of *A Mathematician's Apology*, who co-names a principle of genetic equilibrium with Weinberg.
ANSWER: G. H. **Hardy** [or Godfrey Harold **Hardy**] (Clues from the Hardy-Littlewood circle method, Hardy-Littlewood maximal operator, and Hardy-Littlewood conjectures)
<SK, Math>

12. **In a novel by this author, the narrator's father resolves a heated argument by pointing to the skies and saying, "Watch out, son, there's One who can pee on all of us!" The protagonist of a novel by this author observes as dried cod and pecorino cheese are unloaded from a Barbary *felucca*, then leads a mob of charcoal burners in a melee against the pirates. A novel by this author ends as a character explains that the "inferno of the living is not something that will be… it is what is already here. " This author created a boy who (*)** hunts small game with his faithful dachshund Ottimo Massimo after fleeing a meal of snails prepared by his sister Battista. In a different novel by this author, an explorer discusses Isidora, Diomira, and the other 53 title locations with Kublai Khan. For 10 points, name this Italian author of *The Baron in the Trees* and *Invisible Cities*.
ANSWER: Italo **Calvino**
<INB, Long Fiction>

13. **This philosopher's meeting with a German theologian and an Italian poet is recounted in the first chapter of Michael Gillespie's *The Theological Origins of Modernity*. Claude Pannaccio has written about a system devised by this philosopher that relies on personal, material, and simple suppositions. A passage from John Stuart Mill's *A System of Logic* echoes this thinker's use of the word "whiteness" to differentiate absolute and connotative terms. Walter Burley disagreed with this philosopher's (*)** reduction of Aristotle's ten categories into two: substance and quality. In contrast to Duns Scotus's realism, this thinker's *Summa Logicae* solved the problem of universals by arguing they are created by the mind in his articulation of nominalism. For 10 points, one should not "multiply entities without necessity" according to what Scholastic philosopher's namesake razor?
ANSWER: William of **Ockham** [or William **Ockham**]
<AK, Philosophy>

14. **This politician responded to a letter asking his country to become "worthy of the greatest glory" written by Maxim Gorky after earlier having drafted a letter for Fritjof ("FRIT-yoff") Nansen to send to Vladimir Lenin. Brand Whitlock oversaw a relief effort by this man, the subject of a multivolume biography by George H. Nash. King Albert gave this man a passport marked "perpetual" and the title "Friend of the Belgian Nation" due to his job as the leader of the Commission for (*)** Relief in Belgium. This man led a campaign to promote wheat rationing and "meatless Mondays" during his leadership of the U.S. Food Administration during World War I, which became the American Relief Administration. This man ran on the slogan "a chicken in every pot and a car in every garage," and signed the Hawley-Smoot tariff after defeating Al Smith. For 10 points, name this politician whose relief efforts during World War I preceded his term as president during the onset of the Great Depression.
ANSWER: Herbert **Hoover** [or Herbert Clark **Hoover**]
<AK, US History>

15. **Denis Florence MacCarthy's translation of this play faithfully maintains the rhyme scheme of its opening monologue, which ends, "My fate may well be so: / But where shall one poor wretch find pity in her woe." An elderly man in this play offers his beard as a "snowy carpet" for another character to trample. When a servant in this play dismisses a threat that "just can't be done," his tormentor quips, "No? Well… I'll just try it," and throws the servant off of a (*)** balcony. A woman in this play questions a potential suitor's fidelity by pointing out a portrait-containing locket dangling from his neck. At the start of this play, the jester Clorin and the vengeful Rosaura stumble across a tower home to a prisoner dressed in animal hides. At this play's climax, that

prisoner spares the life of the elderly King Basilio and assumes the throne. For 10 points, prince Segismundo appears in which play by Pedro Calderon de la Barca?
ANSWER: _**Life is a Dream**_ [or _**La vida es sueno**_]
<INB, Drama>

16. **The prediction of one theory of this process that the dynamic structure factor falls off as the exponential of "negative-Q-squared times root-t" was confirmed by neutron spin echo experiments. This process occurs radially to limit axial spreading of sample pluses in Taylor Dispersion Analysis. One model of this process considers a Rouse chain inside a tube defined by a set of topological constraints. That model developed by Edwards and de Gennes ("duh ZHEN") describes this process in the reptation regime. This process is studied in terms of self-avoiding lattice paths in (*)** polymers. The time evolution of a Wiener process is equal to the sum of terms representing drift and this process in the Fokker-Planck equation. The mean square displacement of this process at time t is equal to twice a namesake coefficient times t. For 10 points, Fick's laws govern what movement of particles driven by a concentration gradient?
ANSWER: **diffusion** [accept polymer **diffusion**; accept self-**diffusion**; prompt on Brownian motion; prompt on random walk] (The first sentence refers to the Rouse model)
<JS, Chemistry>

17. **This action is the focus of Aarne-Thompson folktale types 1875 through 1999, which include the Brothers Grimm story of Knoist's three sons. In a fable by Aesop, Prometheus breathes life into a footless statue which thereafter presides over this action. Warriors could neither move nor perform this action when Lugh ("loo") held his sword Fragarach ("FRAH-gah-rakh") to their necks. A youth who never had to perform this action to "avoid the rod" instead performed its opposite, which earned him "honor and love," according to an anecdote recorded by (*)** Parson Weems. A character created by Carlo Collodi performs this action _ad nauseum_ as a fairy interrogates him about some gold coins which he later foolishly plants in the ground. In Greek myth, this action was overseen by a companion of Dolos named Pseudologos ("pseudo-logos"). When his father confronted him about chopping down a cherry tree, George Washington _didn't_ perform this action. For 10 points, identify this action which made Pinocchio's nose grow.
ANSWER: telling **lies** [or **lying**; accept telling **tall tale**s or other clear equivalents]
<INB, Mythology>

18. **Some rulers of this kingdom wore a crown made of beads named for its resemblance to a parrot's beak. Graham Connah excavated a 15-kilometer wall surrounding this kingdom's capital, which was supplemented by an unprecedented 16,000 kilometers of rural walls. Henry Galway sought to break the monopoly on palm oil that this kingdom developed under Ovonramwen. A red flag depicting a decapitation was retrieved from Harry Rawson's (*)** punitive expedition that burned this kingdom's capital to the ground. A sixteenth-century ivory mask in the Met bears the likeness of this kingdom's Queen Mother Idia. This kingdom of the Edo people was ruled by _oba_s, who were depicted in several lost-wax cast artworks that the British Museum is gradually repatriating. For 10 points, over a thousand namesake "bronzes" were looted from what kingdom in western Nigeria, which is not to be confused with the present-day country that contained the Kingdom of Dahomey?
ANSWER: Kingdom of **Benin** [or **Benin** Empire]
<KS, Other History>

19. **A choreographer who added an extra _Travail_ variation to this ballet's final _grand pas de deux_ also suffered a bout of pemphigus that led to his temporary replacement. For the Bolshoi Ballet, Sergei Vikharev reconstructed this ballet and used four sets of six dancers arranged in a grid for its signature number. Lev Ivanov and Enrico Cecchetti ("check-ketti") choreographed a version of this ballet, which often features Father Time sitting atop a clock in the background of its signature number. Contemporary stagings of this ballet are often based on (*)** Marius Petipa's revival for the Imperial Ballet, but its original choreography was done

by Arthur Saint-Léon ("san-lay-ON"). It's not *La Gioconda* ("lah jo-CON-dah"), but the first act of this ballet includes a *mazurka* and a *csárdás* ("CHAR-dash"), and its third act features the "Waltz of the Hours." In this ballet, a scene set inside the doctor's house features a jealous Swanhilda imitating the title character, but she eventually escapes and reconciles with Franz. For 10 points, name this ballet partly based on E. T. A. Hoffman's "The Sandman" and titled for a mechanical doll, which is set to music by Léo Delibes ("LAY-oh duh-LEEB").
ANSWER: *Coppelia*
<AK, Ballet>

20. **A combination of the GTPases ("G-T-P-aces") Rab27a, Rab32, and Rab38 attach to an organelle that transports vesicles containing this compound. That vesicle containing this compound is created from fragments of a protein called PMEL. This compound is abnormally produced in patients with dysplastic nevus syndrome. This compound is overproduced in patients with neurofibromatosis ("neuro-fibro-muh-tosis") in a symptom named for (*)** Lisch. Production of this compound affects the B and C in the ABCDE mnemonic for one condition. The Breslow depth is used for staging cancer of cells producing this compound, which has pheo- ("FEE-oh") and eu- ("yoo") types. This compound is produced from a dopaquinone ("dopa-quinone") intermediate in a pathway catalyzed by tyrosinase ("tyrosine-ace"). Cells producing this compound are absent in patches in patients with vitiligo ("vit-ee-LEE-go"). For 10 points, name this pigment that determines skin color.
ANSWER: **melanin** [accept **eumelanin**, **pheomelanin**, and **neuromelanin**]
<AK, Biology>

Bonuses

1. This artist developed screen projections for a production of *The Mother* by Bertolt Brecht ("breck't"), who later helped him get admitted to the East Germany Academy of the Arts. For 10 points each:
[10] Name this artist who also illustrated several covers for Upton Sinclair. One of this artist's best known images depicts a certain figure's torso as transparent, with his ribs visible above a pile of coins.
ANSWER: John **Heartfield** [or Helmut **Herzfeld**]
[10] This world leader was the frequent target of Heartfield's satirical photomontages. In a photo overlaid with flowers, this man is shown posing with a young Jewish girl who was known as "the Führer's child."
ANSWER: Adolf **Hitler**
[10] This artist overlaid part of a still of Renée Falconetti with a Cameroonian mask in her series *From an Ethnographic Museum*. Heartfield appears in a photomontage by her featuring several cutouts of the word "dada."
ANSWER: Hannah **Höch** ("hoke" or "hosh" or "hokh" or "herk" or "hersh" or "herkh") [or Anna Therese Johanne **Höch**]
<AK, Photography>

2. Organisms with mastigonemes ("mass-tee-GO-neemz") like *Ochromonas* move with these structures in front. For 10 points each:
[10] Name these *long* structures used by cells to propel themselves through their environment.
ANSWER: **flagella** [or **flagellum**]
[10] A central component of the contractile-fiber systems of flagellates is this family of proteins that has four EF-hand domains. After its initial discovery in green algae, this family was found to be ubiquitous in centrioles, centrosomes, and mitotic spindle poles.
ANSWER: **centrin**s [or **caltractin**s]
[10] Contractile fibers function to reorient these structures that anchor cilia and flagella. These structures arranged in nine triplets are basically modified centrioles.
ANSWER: **basal bodies** [or **basal body**; accept **basal granule**s; accept **kinetosome**s]
<JS, Biology>

3. A failed attempt to initiate this action was the subject of *McCorvey v. Hill*. For 10 points each:
[10] Identify this theoretical action, which would validate so-called "trigger laws" in several states. Terri Collins has stated that one of her main goals in sponsoring House Bill 314, which was approved by Kay Ivey in May 2019, was to foster support for this action.
ANSWER: **overturn**ing ***Roe** v. Wade* [accept equivalents for "overturning"; prompt on restricting abortion or similar answers by asking "what legal action would make that possible?"]
[10] The 2019 decision in this case, which concerned an inventor's tax fraud penalties, unusually overturned 1979's *Nevada v. Hall*, sparking fears that the current Supreme Court may eventually overturn *Roe v. Wade.*
ANSWER: ***Franchise Tax Board of California** v. **Hyatt*** [accept either part]
[10] In 2019, federal judges blocked bills from Georgia, Ohio, and many other states that would outlaw abortion based on the presence of this stimulus, which can be detected as early as six weeks into pregnancy.
ANSWER: fetal **heartbeat** [accept equivalents]
<KS, Current Events>

4. This pope studied at a Catalonian monastery, where he was introduced to Arabic numerals. For 10 points each:
[10] Identify this pope who was credited with reintroducing the abacus and armillary sphere to Europe. He chose his papal name in honor of the pope who supposedly received the Donation of Constantine.
ANSWER: **Sylvester II** ("the-second") [or **Gerbert** of Aurillac; prompt on Sylvester]
[10] Sylvester II tutored several rulers of this name, who presided over a namesake Renaissance toward the end of the first millennium. The first of those rulers was a Saxon who became the first Holy Roman Emperor.

ANSWER: **Otto** [accept **Otto I**, **Otto II**, or **Otto III**; accept **Ottonian** Renaissance]
[10] The theologian Fulbert studied under Sylvester II and established a school at this city's cathedral. Another resident of this city was the similarly-named Fulcher, who wrote a chronicle of the First Crusade.
ANSWER: **Chartres** ("shart" or "shart-ruh") [accept **Fulbert of Chartres** or **Fulcher of Chartres**]
<KS, European History (Continental)>

5. After completing this very specific action, a youth prayed to Zeus, resulting in a sizable object crashing down from the heavens. For 10 points each:
[10] Describe this action that Ilus completed on the advice of a Phrygian king. It brought Ilus to the hill of Atë ("AY-tee" or "AH-tee").
ANSWER: **following** a spotted **cow** until it lies down in exhaustion [accept clear-knowledge equivalents]
[10] This was the object sent to Ilus by Zeus as a sign of approval to construct a city on the hill; unfortunately, Ilus was blinded when he glanced at this object. According to a later myth, the city in which this object was housed would not fall so long as this object remained within it.
ANSWER: the **Palladium**
[10] The story of Ilus chasing a cow to decide where to establish Troy is nearly identical to that of this Phoenician prince, who stalked a cow marked with a half-moon to the spot where he founded Thebes ("theebz").
ANSWER: **Cadmus**
<INB, Mythology>

6. This event serves as the "storm" which interrupts the "secret relationship" between Aileen and Frank Cowperwood. For 10 points each:
[10] Identify this event which, despite occurring "nearly a thousand miles away," makes Frank into a "criminal of a man" as it exposes his coordinated effort to abuse city funds with the treasurer Stener.
ANSWER: Great **Chicago Fire** of 1871
[10] The real-life robber baron Charles Tyson Yerkes inspired the character of Frank Cowperwood, who first appeared in this 1912 novel. It formed the "trilogy of desire" with *The Titan* and *The Stoic.*
ANSWER: *The **Financier***
[10] This naturalist author and creator of Frank Cowperwood also used Chicago as the partial setting to his novel *Sister Carrie.*
ANSWER: Theodore **Dreiser** [or Theodore Herman Albert **Dreiser**]
<INB, Long Fiction>

7. The divergence of the Eliassen-Palm flux characterizes how the heat and momentum fluxes of these phenomena affect circulation. For 10 points each:
[10] Name these longitudinally varying disturbances. Zonally-averaged atmospheric circulation is studied by decomposing variables into an average component and a component due to these phenomena denoted with a prime.
ANSWER: **eddies** [or **eddy**] (These are large-scale eddies, not eddies caused by turbulence)
[10] The dynamics of circulation are typically assumed to be quasi-geostrophic, meaning that the number named for this scientist is small. This Swedish meteorologist also names high-altitude waves driven by the Coriolis force.
ANSWER: Carl-Gustaf **Rossby** [or Carl-Gustaf Arvid **Rossby**]
[10] The majority of transport in the atmosphere is driven by a net solar radiation surplus near this great circle. Hadley circulation creates the trade winds in the region between this line of latitude and 30 degrees latitude.
ANSWER: **equator** [accept **zero** degrees latitude]
<JS, Earth Science>

8. This ship was secretly built in Birkenhead with funding from James Dunwoody Bulloch. For 10 points each:
[10] Name this ship that was sunk by the *Kearsarge* at the Battle of Cherbourg. In the Treaty of Washington, Hamilton Fish convinced Great Britain to pay damages for allowing the construction of this ship.

ANSWER: CSS *Alabama*

[10] The contract to build the *Alabama* was arranged by businessmen working with this crop, whose shortages caused a so-called "famine" in Lancashire. This "king" crop was the main export of the Confederacy.

ANSWER: **cotton** [or *Gossypium*]

[10] Raphael Semmes, captain of the *Alabama*, attempted to defuse a situation in this country after two Confederate diplomats were arrested outside its American consulate. Decades later, Theodore Roosevelt sent several ships to this country after bandits kidnapped Ion Perdicaris.

ANSWER: **Morocco** [or Kingdom of **Morocco**; or al-Mamlaka al-**Maghrib**ia]

<KS, US History>

9. This poem's "forsaken" speaker longs for "scenes where man hath never trod / A place where woman never smiled or wept." For 10 points each:

[10] Identify this poem whose speaker bitterly imagines a "living sea of waking dreams" that contains nothing but the "vast shipwreck of [his] life's esteems."

ANSWER: "**I Am**" [or "**I Am**!"]

[10] John Clare, the author of "I Am," was a "peasant poet" of this denomination. T. S. Eliot wrote about "the time of tension between dying and birth" in "Ash-Wednesday" after converting to this non-Catholic denomination.

ANSWER: **Anglican**ism

[10] Clare interspersed affectations for his first crush, Mary Joyce, in a poem titled for this character. An earlier poet dedicated a four-canto poem titled for this character and written in Spenserian stanzas to Ianthe.

ANSWER: Childe **Harold** [or "Child **Harold**;" accept *Chile Harold's Pilgrimmage*]

<INB, Non-epic Poetry>

10. A "basic" form of this concept is described as a modification of instincts necessary "for the perpetuation of the human race in civilization" and is contrasted with a more dangerous surplus form. For 10 points each:

[10] Name this concept that describes a type of tolerance that upholds the status quo in advanced industrial societies according to an essay in *The Critique of Pure Tolerance*.

ANSWER: **repression** [or "**Repressive Tolerance**"]

[10] This book by the author of "Repressive Tolerance" promotes the "Great Refusal" as a method of resisting the methods of control of modern capitalist societies. It posits that industrial societies create false needs and flattens intellectual discourse, leading to the title figure.

ANSWER: *One-Dimensional Man*

[10] *One-Dimensional Man* is a work of Herbert Marcuse, who attempted to synthesize the thought of Marx and that of this thinker in *Eros and Civilization*. Norman O. Brown paralleled this Austrian psychoanalyst's thought with the mysticism of Jakob Boehme ("YAH-kop BO-muh") in *Life Against Death*.

ANSWER: Sigmund **Freud** [or Sigismund Schlomo **Freud**]

<JM, Philosophy>

11. This piece forms a trilogy with companion tone poems titled for *Fountains* and for *Festivals*. For 10 points each:

[10] Name this four-movement tone poem by Ottorino Respighi that depicts the title trees of the title city.

ANSWER: *Pines of Rome* [or *Pini di Roma*]

[10] This instrument only appears in two movements of *Pines of Rome*, both times playing two octaves beneath low C. *Fountains of Rome* includes an *ad libitum* part for this instrument.

ANSWER: **organ** [or **pipe organ**]

[10] Fritz Reiner's celebrated ten-year tenure as this orchestra's music director witnessed the release of stereo recordings of pieces such as *Pines of Rome* under RCA Records.

ANSWER: **Chicago** Symphony Orchestra [or **CSO**]

<KL, Classical Music and Opera>

12. For 10 points each, answer some questions on the physics going on inside SOLIDWORKS ("solid-works").
[10] One of the functions of the SOLIDWORKS Flow Simulation tool is to solve a conjugate model for this general process. The Reynolds analogy relates shear stress to this process.
ANSWER: **heat transfer** [or conjugate **heat transfer**; accept **convection**, **conduction**, or **radiation**]
[10] The similarly named SOLIDWORKS Simulation tool uses this technique that gives the engineer information to evaluate and optimize designs. This numerical technique solves the equation "K times u equals f" for a discrete set of nodes that make up some solid body.
ANSWER: **finite element analysis** [or **FEA**; accept **FEM** or **finite element method**]
[10] Loads described by these *two* words are specified before performing FEA in SOLIDWORKS. *One* of these words describes the mechanics of stationary bodies, while the *other* describes the mechanics of moving bodies.
ANSWER: **static** AND **dynamic** [accept **static**s AND **dynamic**s]
<JS, Physics>

13. A major development in this industry was centered around the Konkan region under the ministry of George Fernandes. For 10 points each:
[10] Name this industry, which Fernandes led in a 1974 strike protesting the lack of an eight-hour work day. As part of a colonial government, William Acworth set a long-lived precedent of presenting a yearly budget for this industry separately from the Union Budget.
ANSWER: Indian **rail** industry [or **train** industry; prompt on transportation]
[10] During the Baroda dynamite case, George Fernandes was charged for planning terrorist acts targeting this Indian prime minister, who ruled by decree during an oppressive mid-1970s period known as "the Emergency."
ANSWER: **I**ndira **Gandhi** [prompt on Gandhi]
[10] Fernandes later served as Minister of Defence during the breakout of this 1999 border conflict often cited as an exception to the Democratic Peace Theory. It ended with India sending back an invasion across the Line of Control.
ANSWER: **Kargil** War
<KS, Other History>

14. Answer some questions about the "swoon theory," the idea that Jesus didn't actually die and get resurrected but just fainted for a bit on the cross. For 10 points each:
[10] Many versions of the swoon theory rely on alleging that Jesus and Joseph of Arimathea were members of this reclusive, hermetic sect of Second Temple Judaism. This sect is often credited with writing the Dead Sea Scrolls.
ANSWER: **Essene**s [or the **Essai**oi]
[10] Hugh Schonfield's hilarious version holds that Jesus deliberately plotted to be kept alive on the cross and then miraculously "survive," but this Roman soldier messed it up by stabbing Jesus with his namesake spear.
ANSWER: **Longinus**
[10] Several Gnostic sects like the Sethians and Basilideans believed that Jesus never really had a physical body, so the person "crucified" was actually this man, who in the Gospels carries Jesus's cross for him.
ANSWER: **Simon** of **Cyrene** [or **Simōn Kyrēnai**os prompt on Simon]
<JG, Religion>

15. This quantity is represented by the highest point on the duck-shaped curve produced by one technique. For 10 points each:
[10] Name this quantity. In one technique, this quantity is proportional to the square root of the scan rate according to the Randles-Sevcik equation.
ANSWER: **peak current** [or **maximum current**; or **peak cathodic current**; or **peak anodic current**; prompt on just current]
[10] Cyclic voltammetry uses three electrodes: a working electrode where the half-reaction of interest takes place, a reference electrode with a known equilibrium potential, and this electrode where the other half-reaction takes place.
ANSWER: **counter** electrode

[10] In electrochemistry, reversible processes with fast electron transfer are named for this scientist. This scientist also names an equation that gives the equilibrium reduction potential of a half-cell.
ANSWER: Walther Hermann **Nernst**
<AK, Chemistry>

16. James MacCallum Smith frequently ran newspaper articles advocating for this cause, which gained popular support after the onset of the Great Depression. For 10 points each:
[10] Identify this goal that was approved by a 1933 referendum called by James "Moo-Cow" Mitchell. Despite the results, a delegation represented by a swan symbol could not convince the British Parliament to change a 1901 Commonwealth constitution to allow this goal to be accomplished.
ANSWER: **secession** of **Western Australia** [accept any answer that indicates **Western Australia separating** from Australia; prompt on secession by asking "what territory is seceding?"]
[10] The lack of approval from the Australian government meant that Parliament could not force secession because of this 1931 act. This act granted legislative equality to British dominions, effectively forming the Commonwealth.
ANSWER: Statute of **Westminster** 1931
[10] A previous attempt at Western Australian separation was led by residents of Kalgoorlie who depended on mining this precious metal. In the 1800s, Chinese immigrants traveled to Victoria and California to find this metal.
ANSWER: **gold** [or **Au**]
<KS, European History (Commonwealth, Ancient, Historiography)>

17. In his lecture "Writing for the Theatre," this playwright identified two types of silence: one "where no word is spoken" and another where "a torrent of language is being employed." For 10 points each:
[10] Identify this British playwright whose middle period output included a number of "memory plays," such as *A Kind of Alaska* and *Betrayal*. Earlier, he wrote about Stanley Webber's abduction in *The Birthday Party*.
ANSWER: Harold **Pinter**
[10] Irving Wardle borrowed this three-word phrase from the subtitle of David Campton's play *The Lunatic View* to describe Harold Pinter's dark, disjointed plays.
ANSWER: "**comedy of menace**" [or "**comedies of menace**"]
[10] In his 2001 book on *British Drama Today*, Aleks Sierz coined this term to describe an emergent trend of blunt and obscene drama, exemplified by Sarah Kane's *Blasted* and Mark Ravenhill's *Shopping and Fucking*.
ANSWER: "**in-yer-face** theatre"
<INB, Drama>

18. Stephen Borgatti simplified an overcomplicated measure central to Ronald Burt's popularization of these concepts by equating a network's "redundancy" to twice its number of ties over its number of nodes. For 10 points each:
[10] Name these areas of sparse ties between denser groups in a social network. Burt argues that "brokers" found in these structures produce most "good ideas" since they are comparatively likely to encounter novel information.
ANSWER: **structural hole**s [prompt on partial answer]
[10] Burt created his "structural hole" theory in part as a theory of this concept, which refers to the resources that accrue from interpersonal relationships. Robert Putnam traced the "decline" of it in America in *Bowling Alone*.
ANSWER: **social capital** [prompt on partial answer]
[10] Mark Granovetter's similar "Strength of Weak Ties" theory derived from a study of this activity. A Bertrand and Mullainathan ("mullay-nathan") paper is titled for the disadvantage of being named "Lakisha" or "Jamal" in this activity.
ANSWER: **getting a job** [or **searching for a job**, accept any answer that describes seeking employment]
<JG, Sociology>

19. Andrew Graham-Dixon highlighted the artist's inclusion of this word as a clear reference to the Protestant Reformation. For 10 points each:
[10] Identify this word. In a 1533 painting, this is the first word visible on a page of Peter Apian's *New and Reliable Instruction Book of Calculation for Merchants,* a book that itself appears situated between a globe and an anamorphic skull.
ANSWER: "**Dividirt**" ("DIV-ee-deer't")
[10] This German painter included Peter Apian's book, as well as a number of other highly-detailed ornamentations, in his double portrait of Jean de Dinteville ("duh dan-tuh-VEE") and Georges de Selve ("duh SELV") titled *The Ambassadors.*
ANSWER: Hans **Holbein** the Younger
[10] Holbein included one of these objects decorated with a characteristic 'S' motif on the top shelf in *The Ambassadors.* Hans Memling often included "hook" motifs in his depictions of these objects in his paintings.
ANSWER: **carpet**s [or **rug**s]
<INB, Painting and Sculpture>

20. An exile who returns to this city and works for the shopkeeper Mincel falls in love with Izabela in the novel *The Doll.* For 10 points each:
[10] Identify this city. A story set in it follows Black Dobbe's ulcerous husband, an amateur astronomer who obsessively pores over the *Ethics* of Spinoza.
ANSWER: **Warsaw**, Poland
[10] This Yiddish Nobel Laureate drew on his experience growing up in Warsaw for the setting of his story "The Spinoza of Market Street." He also wrote a story about the incredibly gullible "Gimpel the Fool."
ANSWER: Isaac Bashevis **Singer**
[10] This other author titled his novel *Mila 18* after a bunker located within the Warsaw Ghetto. An immigration ship provided the title of his incredibly popular historical novel about the founding of Israel, *Exodus.*
ANSWER: Leon **Uris** [or Leon Marcus **Uris**]
<INB, Miscellaneous Lit>