



# ACADEMIC COMPETITION FEDERATION

2014 ACF NATIONALS

PACKET BY NORTHWESTERN, WILLIAM & MARY, AND STANFORD

## TOSSUPS

1. In the 1976 installment of a lecture series named for this thinker, Edmund Leach criticized his attempts to construct a “natural science of society,” and suggested that a seashell metaphor used by this man in correspondence with a colleague was taken from D’Arcy Thompson’s *On Growth and Form*. This thinker engaged in a notable 1937 debate over what the theory of such a science would look like with Mortimer Adler at the University of Chicago, where this thinker trained Fred Eggan, William Warner, and the excellently-named Sol Tax. This man argued that fraternal equivalence was the most common classification principle adopted in primitive society in his article “The Mother’s Brother in South Africa,” which became the first part of a larger volume that also examined “The Sociological Theory of Totemism,” and was titled *Structure and Function in Primitive Society*. This man’s most famous work relied on Durkheim in arguing that the purpose of things like the “Religious and Magical Beliefs” and “Myths and Legends” of the title people was the maintenance of “social cohesion.” For 10 points, identify this British anthropologist who was among the founders of structural functionalism and wrote *The Andaman Islanders*.

ANSWER: Alfred Reginald RADCLIFFE-BROWN

2. One of these poems discusses how a character will see “Grace that shall mould . . . by silent sympathy” in the “motions of the Storm”, but it ends when the speaker laments Nature has only left him, “The memory of what has been, / And never more will be.” In another one of these poems, the speaker says he “will dare to tell” how he fell asleep on his horse while staring at the “descending moon” before freaking out when the horse moves while he’s asleep. One of them ends with the lament, “But she is in her grave, and, oh, / The difference to me!” and another begins by describing a figure who “three years grew in sun and shower.” This series of poems includes “I Traveled Among Unknown Men,” “Strange Fits of Passion Have I Known”, and one which describes a girl who “seemed a thing that could not feel / The touch of earthly years” after the speaker declares, “A slumber did my spirit seal.” For 10 points, name this group of five poems titled for an idealized country girl possibly based on the poet’s sister Dorothy, written by William Wordsworth.

ANSWER: LUCY Poems [prompt on “poems by Wordsworth” before the end]

3. Shortly after taking power, this ruler asked a scholar to draft a coronation decree which compared him to the Duke of Zhou who assisted King Cheng in ancient times; when that scholar refused, this man ordered that ten degrees of his kinsmen be executed, one more than the usual nine. After that incident, this ruler allegedly built a giant bell in his capital to atone for the black karma he created, according to the later poet Shen Deqian. This ruler was known as the Prince of Yan before he came to power during a civil war called the Jingnan Rebellion. He commissioned his secretary Xie Jin to create a massive encyclopedia which bears his name. He also built the Porcelain Tower of Nanjing, and began construction of the Forbidden City after moving his capital to Beijing. For 10 points, name this third emperor of the Ming Dynasty, who promoted the voyages of Zheng He.

ANSWER: YONGLE Emperor [or YUNG-LO; or the YUNGLO Emperor; or ZHU DI; or CHENGZU; prompt on the “Prince of Yan” before mention]

4. Moreau et al developed the first blood test for asymptomatic children at risk for this condition, which tests the cellular response to melatonin. Stuart Weinstein led a series of longitudinal studies over fifty years at the University of Iowa investigating patients with this condition. Ehlers-Danlos, Prader-Willi, and Marfan syndrome can all induce the “syndromic” subtype of this condition. It’s not related to the brain, but severe cases of cerebral palsy can induce a correspondingly severe secondary form of this condition. The Cobb angle is primarily used to assess the severity of this condition. The Weinstein study proved that this condition’s most common “late-onset idiopathic” form is mostly harmless and self-limiting, but in severe cases, when

this condition pressures the heart and reduces lung capacity, surgery and bracing are required. This condition is similar to lordosis and kyphosis, but it can be distinguished by taking a chest X-ray from the rear and noticing an “S” shape. For 10 points, name this deformity, a curving of the spine.

ANSWER: SCOLIOSIS

5. The first movement of one symphony by this composer contains a second subject stated in E minor by the clarinet against two flutes, and a coda sustained over a bass playing an unchanging E. Another symphony by this composer begins with string tremolos, followed by a solo horn sounding the phrase B-flat-E-flat-B-flat, followed by C-flat-E-flat-B-flat. Despite the presence of six question marks and the words “not valid” in the score of one of this man’s symphonies, most people still play the cymbal crash and the triangle at the end of its second movement. That E-major symphony, which begins with a theme that was supposedly whistled to the composer by his friend in a dream, and later contains a dirge played by four misleadingly-named modified horns, was his seventh. His most famous symphony includes a fortissimo passage in which the orchestra plays two quarter notes followed by a quarter note rhythm, known as its composer’s namesake “rhythm,” and includes a 2/4 “Hunting Scherzo” as its third movement. For 10 points, name this Austrian composer who idolized Wagner and composed the *Romantic* fourth symphony.

ANSWER: Anton BRUCKNER

6. This god was nearly caught trying to escape when a lute that he stole brushed against a tree, causing the earth to reverberate, but his pursuer was slowed because this god had tied his hair to the rafters while he was sleeping. This god was protected by a magic scarf while sleeping in rooms filled with snakes, centipedes, and wasps during one trial, and he passed another by finding an arrow in the middle of a flaming field. Together with his good pal, the dwarf god Sukuna-hikona, he created the world and the art of medicine. He once gave compassionate advice to a white rabbit who was stripped of its fur by a crocodile, so the rabbit foretold that this man, and not his 80 cruel brothers, will marry Yakami, the princess of Inaba. He crawls out of a volcano to elope with Princess Suseri after being chased through the underworld by her father Susanowo, who then gives up and accepts this kami as his son-in-law, telling him to rule Izumo as “Master of the Great Land.” For 10 points, name this kami of happiness who rules the world before Ninigi.

ANSWER: OKUNI-NUSHI [or OKUNINUSHI Okami, or accept ONAMUCHI or ONAMUJI]

7. One anecdote from this work concerns negotiating with a famous author, who agrees to write a piece in exchange for a box of .45-caliber Gold Saber bullets and a two-hour session painting watercolors on two naked women. This work begins with a section outlining the “rules and suggestions for enjoyment of this book.” A lengthy episode in this book concerns a hoax article claiming that former child star Adam Rich was murdered. The cartoonist Judd Winick is cast instead of the protagonist on a television show in this book, which structures the second half of one chapter as an audition interview for *The Real World*. The narrator of this work miraculously discovers a cardboard box containing the lost “cremains” of his cremated mother. Shalini and Moodie help its narrator publish *Might* magazine. This book’s narrator is forced to become the guardian of his teenage brother Toph in his early twenties after their mother and father both die of cancer within a three-month span. For 10 points, name this immodestly titled memoir published in 2000 by Dave Eggers.

ANSWER: A HEARTBREAKING WORK OF STAGGERING GENIUS

8. In a grisly incident in this conflict, a group led by Felix St. Vrain was massacred and St. Vrain’s heart was cut out of his body after he was dismembered. In this conflict, two thousand dollars was offered as ransom after two teenage girls called the Hall sisters were abducted. The legate of one side in this war tried to secure peace at Dixon’s Ferry, but his white truce flag was torn down and forces were raised by Samuel Whitesides. In it, Governor John Reynolds put out a call for troops to assemble after a party known as the “British Band” refused to retreat. In this war, the force of General Henry Atkinson suffered an early loss at the Battle of Stillman’s Run, but his fellow colonel Henry Dodge quickly won a victory which allowed the steamboat *Warrior* to fire on defenseless targets for two days, in the Bad Axe Massacre. The namesake of this conflict rejected the policy of Keokuk, his fellow chief. For 10 points, name this conflict that saw the only military service of Abraham Lincoln, an 1832 war named for a leader of the Sauk Indians.

ANSWER: BLACK HAWK War

9. In the theory of Rayleigh scattering, the assumption that the wavelength is much greater than the particle size means that

the incident wave can be taken to induce this quantity in the particle. The power radiated by a center-fed linear antenna with small size compared to the wavelength is proportional to the absolute value squared of this vector quantity. The bulk form of this quantity is related to the dielectric constant via the Clausius-Mossotti relation. This quantity is induced in piezoelectric crystals by applied axial distortion and ferroelectric materials are characterized by a non-zero value for this quantity in the absence of an applied field. Polarization is equal to this quantity per unit volume, and this quantity crossed with the electric field vector gives a torque. For 10 points, identify this quantity, which for two point charges plus and minus  $q$  separated by a distance  $d$  is given by  $q$  times  $d$ , a measure of charge separation.

ANSWER: ELECTRIC DIPOLE MOMENT [accept POLARIZATION before mention, prompt on “electric field” or “dipole moment”]

10. Outside this building, there are two obelisks mounted on bronze turtles designed by Giambologna, which stand in an open square market that was the site of an annual chariot race. Michelangelo may have helped Ghirlandaio paint two sets of frescoes depicting the lives of Mary and John the Baptist on opposite walls of this church’s Tornabuoni Chapel. Brunelleschi carved a notable wooden Crucifix for this church’s Gondi Chapel in response to Donatello’s crude *Crucifix* at Santa Croce. The most famous work in this church supposedly has a representation of Adam’s tomb in its lowest section, which shows a skeleton lying in a sarcophagus carved with the memento mori: “I was what you are and what I am you will be.” Before being moved to the Uffizi, Duccio’s *Rucellai Madonna* was originally painted for this church, which also has Giotto’s painted Crucifix hanging from the center of the nave. This church’s best-known fresco shows Christ’s crucifixion in a trompe l’oeil barrel vault. This church was the home of the first painting in Western art to use full perspective. For 10 points, name this Dominican basilica in Florence that houses Masaccio’s *Holy Trinity*.

ANSWER: SANTA MARIA NOVELLA

11. This man wrote a work which begins “The nightingale of separation perched upon the branch of the horizon calls out in grief.” He refused to sleep for three nights to emulate those nightingales, who sang night and day in adoration of rosebushes. He opened another work with the dedication “blessed be the righteous that quaff from these crystal streams.” This man, who gave a declaration in the Garden of Ridván after living there for 12 days, wrote the *Gems of Divine Mysteries* and provided advice for rulers in his *Tablet of the Kings*. Only two photographs exist of this man, who spent the last 24 years of his life at a prison colony in Akka. His final work was addressed to an Aqa Najafi, who had executed many of this man’s followers, and whom this man castigated as the “son of a wolf.” His views were collected in the *Book of Certitude*, and he claimed to be the messianic figure prophesied by the Bab. For 10 points, name this founder of the Baha’i faith.

ANSWER: BAHAULLAH [or BAHÁ’U’LLÁH; or MIRZA Husayn Ali Nuri]

12. One song on this album opens with fast triplets in the saxophone section before the main theme, a fast 4/4 shuffle, is introduced. This album’s closing track begins with a solo trombone, which continues playing over the main theme with heavy glissandos. This album opens with a song in a fast 3/4 time that features some indiscernible shouting throughout. It’s not *Time Out*, but this album’s S. Neil Fujita-designed cover art features some abstract geometrical shapes. One song on this album is a twelve-bar blues that goes from stop time to shuffle and back. “Better Git it In Your Soul” and “Jelly Roll” are the first and last tracks on this album, but the most famous tracks on it are a slow “elegy” for Lester Young and one which was recorded as instrumental due to the label’s objections over its lyrics, addressed to a Governor of Arkansas. For 10 points, name this 1959 jazz album containing “Goodbye Pork-Pie Hat” and “Fables of Faubus,” whose title puns on the Latin declension of the surname of its composer, Charles Mingus.

ANSWER: MINGUS AH UM

13. One signatory to this treaty was allowed to take four hostages from the opposing royal court back with him to his capital to ensure that its terms were followed. That king entered this agreement after failing to convince the Turks to loan him two million ducats, and after suffering losses the two previous years at the battles of Saint-Quentin and Gravelines. This treaty restored Emmanuel Philibert to his estate and married him off to the Duchess of Berry. One side in this treaty retained the three bishoprics of Metz, Toul, and Verdun that it had won seven years earlier from the Holy Roman Empire. That side held a jousting tournament to celebrate this treaty, where Gabriel Montgomery had a sliver break off from his lance and pierce the king’s eye, in the presence of surgeon Ambroise Paré. This treaty ceded Corsica back to the Republic of Genoa, and brought an end to the Habsburg-Valois Wars. For 10 points, name this 1559 peace by which Henry II of France gave up control of Italy to Philip II of Spain.

ANSWER: Peace of CATEAU-CAMBRESIS [or Treaty of CATEAU-CAMBRESIS]

14. One of this author's poems ends with the couplet "Only sound needs echo and dreads its lack / A glance is accustomed to no glance back." The speaker of one poem by this author sees "wild mares carousing in tall sedge," "steam dreadnoughts or cruisers," and the "expanse grow[ing] blue like lace underwear" as he travels eastward on a globe. This poet parodied the opening of Auden's "In Memory of W.B. Yeats" by starting an elegy with the line "He died in January, the beginning of the year." This poet asked "what is space anyway if not the body's absence at every given point?" in a poem explaining that the title woman is older than her sister Clio. This poet wrote "Verses on the Death of T.S. Eliot" and the collection *To Urania*. Sartre, Yevtushenko, and his mentor Anna Akhmatova succeeded in forcing the commutation of this poet's imprisonment in Siberia for "social parasitism." For 10 points, name this author of "Elegy for John Donne," who served as the U.S. Poet Laureate after emigrating from Russia.

ANSWER: Joseph BRODSKY

15. A witness to this event published his letters under the title *The Road of No Return*, and his photographs were made into a documentary by Carlo Massa entitled "Destination Nowhere." Another account of this event, called the "Blue Book," was authored by James Bryce with historian Arnold Toynbee. One of its survivors was a musician known as Komitas, who was driven to madness in its aftermath. The impetus for this event was the passing of the Tehcir Law, which led to the events of Red Sunday. Despite the efforts of ambassador Henry Morgenthau Sr., the United States declined to intervene in this event. This event was largely ordered by members of the Committee for Union and Progress, many of its casualties resulted from a forced march through the Syrian desert. Its discussion was long prohibited by Article 301. For 10 points, name this event in which Enver Pasha, an Ottoman general, orchestrated the extermination of a minority ethnic group in the early 20th Century.

ANSWER: the ARMENIAN GENOCIDE [accept equivalents for genocide, such as ARMENIAN HOLOCAUST, ARMENIAN MASSACRES, etc., or the Armenian designation "MEDZ YEGERN;" also accept "DEPORTATION OF ARMENIANS" from Constantinople or "INTERMENT of ARMENIANS" and reasonable equivalents]

16. This theorem is extended to the ring of polynomials by the Lagrangian interpolation problem. This theorem is used to discover the secret in both the Mignotte and Asmuth-Bloom schemes for secret sharing. Kurt Godel proved his incompleteness theorem by applying Cantor's pairing function and this theorem, which is also used by the Good-Thomas algorithm to re-index the data output in a fast Fourier transform. This theorem can be used to show that the number of reduced residue classes for some integer  $m$  is equal to the Euler totient function applied to  $m$ . The RSA algorithm uses this theorem in the private key to accelerate decryption. An extension of this theorem shows an isomorphism between a quotient ring and a product of quotient rings. This theorem states that for the groups of integers  $n$  and  $a$ , where  $n$  are pairwise coprime integers, there is one integer congruent to  $a$  modulo  $n$ . For 10 points, name this important theorem from number theory, which was stated around 1500 years ago by the mathematician Sunzi in the country for which it is named.

ANSWER: CHINESE REMAINDER theorem

17. This man proudly claimed to be a descendant of Louis XIV through the mistress La Belle Montmorency, saying "I'd rather be the bastard of a king than the son of an honest man." While serving in the army, he had dinner every night with a group of 40 tame monkeys, and talked to them in order to create a Simian Dictionary, but he gave up after deciphering only sixty "monkey words." He had a drinking contest with the mountain man Porter Rockwell on his visit to Salt Lake City, which he wrote about in his book *The City of the Saints*. He secretly married Isabel Arundell, who wrote his biography after he died while serving as consul in Trieste. He was played by Patrick Bergin in the 1990 film *Mountains of the Moon*. Because a disease blinded his traveling companion, this man became the first person to view Lake Tanganyika, though he later feuded with that companion, John Speke, over the source of the Nile. He's also known for bringing the *Kama Sutra* back to England, and translating *One Thousand and One Nights*. For 10 points, name this 19th century British adventurer who traveled in disguise to Mecca and India.

ANSWER: Captain Sir Richard Francis BURTON

18. Using Ac-DAP to facilitate "de-blocking" in this reaction eliminates the need for an extra purification step. Wang et al developed a "ladder" technique that alternates cycles of this reaction with mass spectrometry. Dansyl chloride is sometimes used as a reagent in this reaction because it produces fluorescent sulfonamides, particularly in the "subtractive" type. This reaction

improves upon an earlier technique that used a benzyl alcohol to start a Curtius rearrangement. Humpback whale myoglobin was used as a reagent in the first automation of this reaction, developed by Begg and its namesake. Following an extraction into an organic solvent and an exposure to acidic conditions, a phenylthiohydantoin derivative is produced in this reaction, an improvement over a similar procedure named for Max Bergmann, which begins with the reaction of phenylisothiocyanate with an uncharged terminal amino group. For 10 points, name this reaction invented by a Swedish chemist, which can synthesize up to 30 amino acids in a peptide.

ANSWER: EDMAN degradation [prompt on “degradation”]

19. In this work’s dedication, the author notes that if he “had to make the choice of the place” of his birth, he would have “preferred a society which had an extent proportionate to the limits of the human faculties.” This work claims that man is different from beast because of his ability to improve at will, an attribute known as “perfectibility.” A contrast in this work is drawn between the kind of man who is self-sufficient and acts in accordance with his natural instinct, and the kind of man who is led astray because his reason turns against him and engenders egocentrism. This work contrasts a love of self that functions as self-preservation and a self-love that is dependent on how one is perceived by others, and its second part argues that “the first man who, having enclosed a piece of ground, bethought himself of saying ‘This is mine,’” was the “real founder of civil society.” For 10 points, identify this work of political philosophy dedicated to the Republic of Geneva which contrasts the *amour de soi* with the *amour propre*, written by Jean-Jacques Rousseau to investigate the reason for disparity between people.

ANSWER: DISCOURSE ON the Origin and Basis of INEQUALITY Among Men [or DISCOURS SUR L’ORIGINE ET LES FONDEMENTS D’INEGALITE PARMI LES HOMMES; accept ROUSSEAU’S SECOND DISCOURSE]

20. One character in this play rattles off payments to peddlers like “scourers,” “dealers in women’s underclothing,” “shoemakers,” “slipper-makers,” and “cabinet-makers” in a monologue about why it’s imprudent to marry a poor woman without a dowry. In this play’s opening scene, a servant woman threatens to make a “long capital letter” of herself, meaning that she’ll hang herself so that she resembles the letter “I.” A key character in this play never appears, but in one scene the audience can hear her offstage pangs of labor. In a famous scene, its main character kills a rooster scratching the ground near the title object. This play begins with a prologue spoken by the *lares familiaris*, or the household deity, of the main character, who in its lost ending presumably blesses the marriage of Lyconides to his daughter Phaedria. Lyconides’s slave eventually steals the title object of this play, which is guarded well past the point of paranoia by Euclio. For 10 points, name this comedy about a treasure, written by Plautus.

ANSWER: POT OF GOLD [or AULULARIA]

TIEBREAKER

21. In the first act of one of this author’s plays, Alex MacColgie Gibbs’s anecdote about the Maharaja climbing up a tree is comically misunderstood. This author wrote about Sir Claude Mulhammer sneaking his illegitimate son Colby into his house as a servant in *The Confidential Clerk*. The protagonist of another play by this author believes he is being chased by invisible Furies who appear as “bright angels”; that play begins with Lord Harry Monchensey returning to his family home of Wishwood. This author wrote a play in which the psychiatrist Henry Harcourt-Reilly brings Lavinia back to the title event after she had walked out on her husband Edward Chamberlayne minutes before they were about to host a soiree. Reginald Fitz Urse, Richard Brito, William de Tracy, and Hugh de Morville argue that the title action of another play by this author should be viewed as a suicide. This author of *The Family Reunion* and *The Cocktail Party* wrote a play whose protagonist faces four tempters the night before his assassination in Canterbury Cathedral. For 10 points, name this author who depicted the death of Thomas a Becket in his play *Murder in the Cathedral*.

ANSWER: Thomas Stearns ELIOT

## BONUSES

1. The choral work *To a Nordic Princess* was composed for the Hollywood Bowl wedding of this composer to Ella Ström, a poor girl who had no idea about his sadomasochistic fetishes. For 10 points each:

[10] Name this Australian composer and pianist, renowned for his arrangements of English folk songs such as *Country Gardens* and *Shepherd's Hey*.

ANSWER: Percy (Aldridge) GRAINGER

[10] Grainger trolled performers by including time signatures of 2.5/4 and 1.5/4, and by making the woodwinds play sextuplets, in the “Lord Melbourne” and “Brisk Young Sailor” movements of this collection of folk songs for concert band.

ANSWER: LINCOLNSHIRE POSY

[10] Grainger's piece *In Dahomey* pays tribute to black American folk music, something that this Czech composer also did in his E minor ninth symphony.

ANSWER: Antonin (Leopold) DVORAK

2. The Laurentian Mountains of Quebec are theorized to have been formed from the same rocks as this range, which is bordered to the west by the Tug Hill plateau, and has a name which means “eater of tree bark” to the Iroquois. For 10 points each:

[10] Name this mountain range located in upstate New York that contains Lake Placid.

ANSWER: ADIRONDACK Mountains

[10] A popular summer hiking destination in the Adirondacks is this highest mountain peak in New York. One of its trails is co-named for Teddy Roosevelt, who was hiking it when he learned that William McKinley had died.

ANSWER: Mount MARCY

[10] This tiny lake on the slopes of Mount Marcy is the origin of the Opalescent River, the highest headwater of the Hudson. This tarn sits in the col between Skylight Mountain and Gray Peak.

ANSWER: Lake TEAR OF THE CLOUDS

3. The protagonist of this story notices a maid at a party he recognizes from World War Two when she was being publicly humiliated for collaborating with the Nazis. For 10 points each:

[10] Name this story by John Cheever in which the title character, Francis Weed becomes discontent with his suburban life after surviving a plane's emergency landing and falls madly in love with the teenage babysitter Anne Murchison.

ANSWER: “The COUNTRY HUSBAND”

[10] John Cheever, the author of “The Housebreaker of Shady Hill,” is probably best-known for this story about Neddy Merrill travelling home by traversing his neighborhood's pools.

ANSWER: “The SWIMMER”

[10] “The Country Husband” is set in this town, a fictional suburb that appears in many Cheever stories. Cheever wrote a story in which Johnny Hake tries supporting his family by stealing from his suburban neighbors, titled “the housebreaker” of this location.

ANSWER: SHADY HILL

4. The losers in this conflict were led by Boiorix, who tried and failed to negotiate with the general Gnaeus Maximus. For 10 points each:

[10] Name this war fought from 113 to 101 BCE between Rome and a coalition of Germanic peoples including the Teutons, Ambrones, and the namesake tribe. Despite initial losses, Rome won the war after victories at Aquae Sextiae and Vercellae.

ANSWER: CIMBRIAN War [or CIMBRI; or CIMBRIAN; or “CIMBRIC Wars”]

[10] The main Roman commander in the Cimbrian War was this man, who served as consul seven times as leader of the Populares faction, feuding with his Optimates rival Lucius Sulla.

ANSWER: Gaius MARIUS

[10] Rome suffered an embarrassing defeat at this 105 BCE battle, where as many as 120,000 Romans were killed. This defeat allowed Marius to take over for the feuding and incompetent generals Quintus Caepio and Gnaeus Maximus.

ANSWER: Battle of ARAUSIO

5. The sequence specificities of these proteins can be analyzed *in vivo* using footprinting. For 10 points each:

[10] Name this function served by proteins with helix-turn-helix, leucine zipper, or zinc finger motifs. Those domains help these proteins recognize the major or minor groove of a certain molecule.

ANSWER: DNA-BINDING proteins [descriptive answers like BINDING TO DNA are fine I guess; reverse-prompt on “transcription factors”]

[10] Many DNA-binding proteins are “factors” for this process, in which RNA polymerase reads one of the DNA strands and produces a complementary molecule of mRNA.

ANSWER: TRANSCRIPTION

[10] This transcription factor assists in the unlimited self-renewal of undifferentiated embryonic stem cells. Ian Chambers, who isolated the gene encoding it, gave it a mythological nickname befitting its seeming immortality.

ANSWER: homeobox protein NANOG [from Tir na Nog, if anyone asks]

6. This group is traditionally exempted from prayer obligations because it is time dependent or “mitzvot sei s’ha’zman grama.” For 10 points each:

[10] Identify this religious subgroup whose prayers were collected in the Yiddish “tkhines.” At SAR high school, this group was recently given permission to wear phylacteries or tefilin.

ANSWER: Jewish WOMEN [synonyms such as GIRLS or FEMALES are great]

[10] A current movement in Modern Orthodoxy is for the establishment of separate quorums that allow for women to participate in this ritual that is done Shabbos mornings with a scroll and a weekly “Parsha.”

ANSWER: READING the TORAH [or LAYNING; or getting ALIYah/ot]

[10] This term, which refers to a menstruating woman and literally means “one who is excluded” or expelled, applies to any woman experiencing uterine bleeding not caused by trauma. The term is also used to describe the purity laws that prescribe separation of husband and wife during the menstrual period.

ANSWER: NIDDAH [or NIDAH]

7. This model was developed by its namesake, the 1979 Nobel Laureate of economics, in the 1954 paper, “Economic Development with Unlimited Supplies of Labor.” For 10 points each:

[10] Identify this model of economic development which models economic development as a transition between a situation where workers are employed in subsistence industries to one where they are employed in capitalist industries.

ANSWER: LEWIS dual-sector model [accept LEWIS transition, prompt on “dual-sector” model or “two-sector” model]

[10] A January 2013 report by the IMF forecast that this country would pass through the Lewis transition between 2020 and 2025. This country’s *hukou* system of residency registration prevented large-scale migration of peasants into industrialized cities until decollectivization in the early 1980s.

ANSWER: CHINA

[10] The subsistence phase of the Lewis dual-sector model is characterized by the assumption that this quantity, the change in output per worker employed in the sector, is zero, while capital accumulation will eventually drive it positive in the capitalist sector. Theodore Schultz, co-laureate with Lewis, strongly criticized the above assumption using evidence from his field work in India.

ANSWER: MARGINAL PRODUCT of LABOR [prompt on “marginal product” or “marginal productivity”]

8. According to the USDA soil taxonomy, gelisol soil is characterized by the presence of this substance, which can contain perennially unfrozen zones called taliks. For 10 points each:

[10] Name this type of soil defined by being continuously frozen for a period of at least two years.

ANSWER: PERMAFROST [or CRYOTIC soil]

[10] Thawing permafrost can result in this form of landscape that results from structural failure of soil that is supported by melting ice. This type of landscape is characterized by lumpy ground, shallow “lakes,” and so-called “drunken trees.”

ANSWER: THERMOKARST

[10] The yedoma type of permafrost is characterized by its high content of this element, which makes up about 2% of the yedoma material by mass.

ANSWER: CARBON [or C]

9. Name these Victorian authors of novels about fallen women, for 10 points each.

[10] Ex-prostitute Mercy Merrick adopts the identity of the Franco-Prussian War casualty Grace Roseberry in *The New Mag-*

*dalen*, an out-of-print novel by this author who's better known for *The Woman in White*.

ANSWER: Wilkie COLLINS

[10] An orphan sweatshop girl is swept into an affair with the rakish aristocrat Henry Bellingham in this author's depressing book *Ruth*, and the title character's sister Esther becomes a streetwalker in her novel *Mary Barton*.

ANSWER: Elizabeth GASKELL

[10] This author wrote a novel in which the kitchen-maid Esther is impregnated by the footman William Latch, but resolves to raise the child despite facing hardships such as her family moving to Australia.

ANSWER: George MOORE [the book is *Esther Waters*]

10. The flag of this culture consists of a blue or red background with a white infinity symbol on top. For 10 points each:

[10] Name this ethnic group which originated through intermarriage between European fur trappers and the aborigines in what came to be Canada. Louis Riel was a leader of these people, and organized their resistance.

ANSWER: MÉTIS

[10] The Métis flag may have first flown at this landmark 1816 battle, also called the "Victory at Frog Plain." Usually referred to as a massacre, it saw a band of Métis under Cuthbert Grant, working for the North West Company, shoot at a bunch of members of the Hudson Bay Company.

ANSWER: SEVEN OAKS Massacre [or the Battle of SEVENOAKS]

[10] The Seven Oaks massacre broke out after a proclamation in 1814 banned the export of this foodstuff. This Cree word describes a compressed meat product perfected by Canadian Indians, consisting of meat strips pounded into paste and mixed it with fat, grease, and berries. Shockingly, fur traders commonly used it as emergency rations.

ANSWER: Pemmican [or PIMIHKAN]

11. This philosopher argued that conversations evolve "rules of accommodation" that "make whatever occurs count as a correct play," in his paper, "Scorekeeping in a Language Game." For 10 points each:

[10] Identify this American philosopher who outlined a semantics for statements of the form "If kangaroos had no tails, they would topple over," in his most famous work, *Counterfactuals*.

ANSWER: David Kellogg LEWIS

[10] Lewis wrote a book *On the Plurality of* these concepts. According to Lewis's theory of modal realism, all possible ones of these are as real as the actual one, and anyone can declare his or hers to be the actual one. Leibniz declared we live in the best of all possible ones.

ANSWER: WORLDS

[10] In one essay, Lewis argued that, according to functionalism, these *two* types of beings would have to experience pain. The first one would have a unique reaction to pain, and the second one would have a vastly different explanation of pain.

ANSWER: a MADMAN and a MARTIAN [both answers required, prompt if one is given]

12. The base of this statue was shipped from Cuba as an uncarved block two weeks before its dedication ceremony and no one could properly secure the statue to the pedestal. For 10 points each:

[10] Name this bronze statue of a nude, winged youth that was commissioned to honor the fallen pilot James McConnell.

ANSWER: The AVIATOR

[10] This American sculpted *The Aviator*, but is better known for Civil War-themed works, such as the General Sheridan Memorial in DC and bas-reliefs depicting Stonewall Jackson and Jefferson Davis on Stone Mountain.

ANSWER: Gutzon BORGLUM

[10] *The Aviator* stands in front of the Clemons Library at this university, which commissioned the piece. A bronze statue of a student guide helping the poet Homer by Moses Jacob Ezekiel sits on this university's greenway The Lawn.

ANSWER: University of VIRGINIA [or UVA]

13. The theta solvent exactly compensates for this effect, which was first postulated by Werner Kuhn in a 1934 paper. For 10 points each:

[10] Name this quantity that is eight times a similar quantity for a hard sphere. In liquid state theory, it's a quantification of the amount by which a molecule's size renders space inaccessible to other molecules, and in polymer science, it drives ends of a polymer chain further apart for a similar reason.

ANSWER: EXCLUDED VOLUME effect



[10] The excluded volume effect is accounted for by the  $b$  term in this equation of state, an improvement over the ideal gas law for real fluids named for a Dutchman.

ANSWER: VAN DER WAALS equation

[10] The scientist who applied the principle of excluded volume to polymers also co-formulated this model for the Gibbs free energy change of mixing a solvent and a polymer, which takes into account dissimilar molecular sizes.

ANSWER: FLORY-HUGGINS solution theory

14. Before being appointed to his most famous position in 1919, this man was a Representative from Pennsylvania. For 10 points each:

[10] Name this Attorney General who led namesake “raids” that attempted to either arrest or deport suspected Anarchists during the post-World War I Red Scare.

ANSWER: Alexander Mitchell PALMER

[10] This Assistant Secretary of Labor canceled more than two thousand arrest warrants for supposed anarchists during the Palmer raids, which led him to be investigated by the FBI. He later blasted the Palmer raids in his book *The Deportations Delirium of Nineteen-Twenty*.

ANSWER: Louis Freeland POST

[10] Palmer was succeeded as Attorney General by this member of the “Ohio Gang,” who had been campaign manager for Warren Harding. He was forced to resign in the wake of the Teapot Dome scandal.

ANSWER: Harry Micajah DAUGHERTY

15. A poet visits this character with an Armenian astrologer who tells him he can overcome melancholy with one hour of concentration. For 10 points each:

[10] Name this painter who supposedly dies after finishing a self-portrait that he locks in an unused kitchen. His friends include artists he calls Louis the Cruel and Tu Fu.

ANSWER: KLINGSOR [accept KLINGSOR'S LAST SUMMER]

[10] This author of the novella *Klingsor's Last Summer* wrote *Demian* and a novel about a title character who takes a trip to the Magic Theater.

ANSWER: Hermann HESSE

[10] Klingsor reappears in this Hesse novel as a member of a secret League that includes Mozart, Puss in Boots, and Plato, who travel to the gorge Morbio Inferiore. This novel is narrated by a man called “H.H.”

ANSWER: JOURNEY TO THE EAST [or Die MORGENLANDFAHRT]

16. This god was once called upon to break the meditation of a god whose offspring might defeat the demon Tarakasur, but in his attempts to do so, he is incinerated by that god's third eye. For 10 points each:

[10] Name this god who, before his transformation into the ashen form Ananga, rode a parrot and drew back a string of honeybees on his sugarcane bow to shoot flower-tipped arrows to make people fall in love.

ANSWER: KAMADEVA [or MARA; or MANMATHUDU; or MADAN; or ATANU; or RAGAVRINTA; or KANDARPA; or MANMADHA; or MANASIJA; or MADANA; or RATIKANTA; or PUSHPAVAN; or PUSHPADHANVA; or KUSUMASHARA]

[10] The god coyly mentioned above is this destroyer in the Hindu Trimurti, whose consorts were Sati and Parvati.

ANSWER: SHIVA [or PARAMESHWARA; or MAHADEVA; or MAHESH; or BHOLENATH; that's it for alternate answers, surprisingly]

[10] In some stories, Kama is responsible for the incestuous lust Brahma developed for his daughter Shatarupa. Shiva punished Brahma for that blunder by performing this physical action.

ANSWER: CUTTING OFF Brahma's fifth HEAD [or DECAPITATION]

17. A 2013 exhibition at the de Young Museum showcased this artist's recent iPad drawings of Yosemite, and was designed as an expansion of the internationally popular show *A Bigger Picture*. For 10 points each:

[10] Name this artist whose recent work, influenced by *plein air*, has focusing on large landscapes including scenes of the Yorkshire woods and his largest canvas ever *Bigger Trees Near Water*.

ANSWER: David HOCKNEY

[10] Hockney painted this double portrait in which the title fashion designer sits on a chair facing his wife Celia Birtwell, who looks at a vase of white lilies, while a white cat sits on his knee.

ANSWER: MR. AND MRS. CLARK AND PERCY

[10] The name of the exhibition *A Bigger Picture* is a pun on Hockney's painting *A Bigger Splash*, which depicts an empty swimming pool he saw in this city that's home to the Getty Museum.

ANSWER: LOS ANGELES [or L.A.]

18. The archaeological traces of this kingdom include the tomb of its king Muryeong, who moved its capital away from the Han River basin. For 10 points each:

[10] Name this kingdom which was located on the southwestern tip of the Korean peninsula to the west of the Gaya confederacy. It was one of the Three Kingdoms which, just like Goguryeo, had its land taken over by the Unified Silla Dynasty around 668 CE.

ANSWER: BAEKJE kingdom [or PAEKCHE]

[10] The Unified Silla employed this caste system to divide up the aristocracy using a measure of closeness to the throne. This system determined everything from the color of clothing worn to the maximum allowed size of the home.

ANSWER: BONE RANK system [or KOLP'UM]

[10] This Silla achieved victory over Goguryeo and Baekje by allying with this Chinese dynasty, which about 100 years later had to deal with the An Lushan Rebellion.

ANSWER: TANG Dynasty [or TANG Chao]

19. One of the Millennium Prize Problems involves proving the existence of the mass gap as part of this theory. For 10 points each:

[10] Name this gauge theory that models elementary particles based on non-Abelian groups.

ANSWER: YANG-MILLS theory

[10] This non-Abelian gauge theory has the symmetry group  $U_1 \times SU_2 \times SU_3$  and unifies the electromagnetic, weak, and strong forces. It includes sixteen subatomic particles such as quarks, leptons, and bosons.

ANSWER: STANDARD MODEL

[10] The Standard Model contains 18 of these numbers, whose values are not determined within the theory itself and must be obtained experimentally; they include the fermion masses, the CKM mixing angles, and a number of coupling constants. There are 7 more if you consider massive neutrinos.

ANSWER: free PARAMETERS

20. The speaker imagines a place "where the world has not been broken up into fragments / By narrow domestic walls". 10 points each:

[10] Name this poem in which the speaker lists several hypothetical attributes of a place "where knowledge is free" before concluding, "into that heaven of freedom, my Father, let my country awake."

ANSWER: "WHERE THE MIND IS WITHOUT FEAR" [or "CHITTO JETHA BHAYASHUNYO"]

[10] "Where the mind is without fear" is a notable poem from this collection by Tagore whose title literally translates as *Song Offerings*.

ANSWER: GITANJALI

[10] In the second stanza of *Gitanjali*, the speaker compares himself to a "little" type of this instrument, made of reed that "thou hast carried over hills" and "breathed through it melodies eternally new."

ANSWER: FLUTE

EXTRA BONUS

21. This thinker castigated the modernists' "refusal to be gulled or lulled," for degenerating into "a ritual despair," and argued that now "the subversive task is to affirm an authentic post-modernist optimism," in her collection, *Beginning to See the Light*. For 10 points each:

[10] Identify this feminist thinker, journalist, and music critic, whose writings on the 90s are collected in *Don't Think, Smile* and who wrote about taking a bus trip to "Escape From New York," in *No More Nice Girls*.

ANSWER: Ellen WILLIS

[10] Willis argued that cultural radicalism could not be separated from egalitarian class politics in a book review titled "What's the Matter with," this man, parodying the title of his own book *What's the Matter With Kansas?* He also wrote *The Conquest of Cool* and edited *The Baffler*.

ANSWER: Thomas FRANK

[10] Willis had also repeatedly critiqued as sexist the left theory of this concept, according to which individuals are manipulated by advertising to purchase more and more goods in order to drive the economy.

ANSWER: CONSUMERISM [or CONSUMERIST theory]