

Chicago Open 2013: No Subtext, Just Tacos.

Packet by Until I Find Yuki Matsunaga (Nick Jensen, Cameron Orth, Kirk Jing, Will Alston)

Edited by Matt Bollinger, Libo Zeng, Sriram Pendyala, Dennis Loo, Sinan Ulusoy, and Kevin Koai, with invaluable contributions by Matt Jackson

Tossups:

1. This writer asked, “Is spring there showing itself on branches of black poplars?” in “To Jose Maria Palacio.” The speaker of one of this author’s poems recalls how he drew the “thorn of passion” out of his heart, but laments, “Gold thorn, so sharp, could I but feel you lodged in my heart!” In another poem, he recalls that he dreamt he “had a beehive here inside [his] heart, and the golden bees were making...sweet honey,” and repeats the line “I dreamt--marvellous error!” three times. Those poems are “I go dreaming down roadways” and “Last night as I was sleeping.” This author’s relationship with (*) Pilar Verderema inspired his collection, *Songs for Guiomar*; his other pseudonymous creations include Abel Martin and his student, Juan de Mairena. This author, who titled a collection for the “fields” of his home region, was the foremost poet of a group that included Pio Baroja and Juan Ramon Jimenez. For 10 points, name this Castilian poet from the Generation of ‘98.

ANSWER: Antonio Machado y Ruiz

2. For one form of this disease, Baumann et. al identified A1 catecholaminergic neurons in the ventral medulla as one of several “trigger zones” causing sympathetic discharge. While it is not an infectious disease, x-ray findings characteristic of this condition include peri-hilar shadowing in a “bat-wing” pattern as well as thick, horizontal markings at the periphery called Kerley B-lines. Re-expansion can cause a rare form of this condition to occur after thoracentesis, while a rapid increase in left ventricular diastolic pressure causes its (*) “flash” variety. Characterized by dyspnea and pink, frothy sputum, it can be explained by a change in parameters of the Starling relationship. Nifedipine is given as prophylaxis to mountain climbers against the “high altitude” form of this disease, and it occurs when pathologies like congestive heart failure or ARDS cause an increase in hydrostatic pressure leading to capillary leakage. For 10 points, name this condition characterized by a buildup of fluid in the alveoli.

ANSWER: pulmonary edema [accept neurogenic pulmonary edema, flash pulmonary edema or High Altitude Pulmonary Edema]

3. The Yancai mentioned in the *Hanshu* are sometimes identified as the Aorsi, a group of these people. Tacitus noted this peoples’ effective use of a lance known as the “barge-pole” or *kontos*, which they are depicted wielding on Trajan’s Column along with spangenhelms and scale armor. The Legio XXI Rapax was destroyed by this people’s Roxolani group. Another group of these people was notably divided into freemen and *limigantes*, or serfs; that group was the Iazyges, who established a kingdom in Pannonia. These people worshipped a (*) sword stuck in the ground, which may have been the inspiration for the sword-in-the-stone myth. After displacing the Scythians in the third century BCE, these people entered Eastern Europe, causing later *szlachta* to believe that they were descendants of this Iranic people. For 10 points, name this nomadic people, the namesake of the pervasive lifestyle of the nobility in early modern Polish culture, as well as a possible basis for the Knights of the Round Table.

ANSWER: Sarmatians [or Sarmatae; or Sarmati; or Sauromatae; accept Alans or Alani until ‘Aorsi’]

4. This work draws a contrast between useless objects like “a celluloid duck, that [makes], when you [press it, most unducklike sound,” and useful ones like “mittens made for giant sloths” before observing that “there are always Uncles.” One character in this work sings a song about “Bleeding Hearts and Death” while another, who may in fact be “a ghost “or “trolls,” sings with a “dry, eggshell voice” through a keyhole. The narrator and his friends imagine that their boot prints are made by hippos and plan to write “Mr. Daniel looks like a spaniel” on Mr. Daniel’s lawn. The narrator of this work imagines himself and his friend Jim as “lynx-eyed hunters” or “trappers from Hudson Bay” in a reindeer-free (*) Lapland as they wait to throw snowballs at cats before Mrs. Prothero calls the fire brigade. For 10 points, name this nostalgic Dylan Thomas narrative adapted from radio, which recounts his memories of the winter holidays in Swansea.

ANSWER: A *Child's Christmas in Wales* [Editor's Note: Please assure teams that ask that this question is in fact under trash, rather than literature]

5. The perpetrators of this event were each wearing a single white glove on their left hands to identify themselves, and journalists tied handkerchiefs around their left hands. This event was the subject of a less-famous film called *Red Dawn*. This event occurred due to dissatisfaction with the military occupation of the National University and targeted an event organized by the CNH, or National Strike Council, in the Plaza of the (*) Three Cultures. A book called "The Night of" this event was compiled from eyewitness testimonies by journalist Elena Poniatowska. Probably ordered by Gustav Diaz Ordaz and Luis Echeverria, this event saw the Olympia Brigade use machine guns to mow down protesters ten days before the Summer Olympics. For 10 points, name this 1968 massacre of student protesters in Mexico City.

ANSWER: Tlatelolco Massacre [or the Night of Tlatelolco]

6. A painting of this scene found in the Kroměříž National Museum was inspired by the death of Marcantonio Bragadin. The same two shepherds appear in Guercino's moonlit version of this scene as in his *Et in Arcadia Ego*. Tom Phillips set his portrait of Iris Murdoch against a backdrop of a painting of this scene, which was Iris Murdoch's favorite painting, and includes a woman sadly playing the violin on the left. In a tenebrist painting of this scene, a brightly-lit, haughty character swings a pink cloth behind him as he stands over another character, who is screaming. In addition to that depiction by (*) José de Ribera, this scene was painted by an artist who included a dog lapping up liquid and a figure holding a pail under an upside-down victim tied to a tree. That version includes Titian's self-portrait as Midas and shows a god drawing blood with his knife. For 10 points, name this scene depicting an uppity satyr being relieved of his skin after losing a music contest to the brother of Artemis.

ANSWER: Apollo Flaying Marsyas [or Apollo and Marsyas; or the Flaying of Marsyas; or the Punishment of Marsyas]

7. One of these animals turned himself into a piece of dirt to impregnate a young girl, whose child then broke open bundles to free the world's stars, moon, and daylight. In Roman legend, Marcus Valerius gained his *agnomen* after another of these animals helped him defeat a giant Gaul in single combat. In the *Dream of Rhonabwy*, these animals are killed by King Arthur's squires, then come back to life and kill those squires, while Owein and Arthur play chess. Another of these animals took a loaf of bread poisoned by some dissatisfied (*) monks out of the grasp of Saint Benedict, which is why this animal is an aspect of Saint Benedict. Six or seven of these animals in the Tower of London are necessary for the protection of England. In Celtic myth, the appearance of one of these animals signals Cuchulain's death, and in Welsh myth, Bran the Blessed takes his name from this animal. For 10 points, name this kind of bird exemplified by Odin's companions Hugin and Munin.

ANSWER: ravens

8. Using results from D.B. Abraham, Bell Laboratory physicists established a connection between this theory behind this model and capillary-wave theory. Aizenman and Higuchi found that the Gibbs measure of this model is a mixture of plus-phase and minus-phase. Kac, of drum-hearing fame, and Ward represented its partition function as a determinant. In this model, by symmetry, the largest eigenvalue at high temperatures of a sequence of matrices that approaches the partition function can be related to the largest eigenvalue at low temperatures. This is the simplest version of a general model that both requires approximation techniques like the (*) Metropolis-Hastings algorithm and is the subject of the Peierls argument, which predicts the existence of a phase transition. In the absence of an external magnetic field, the exact values of the specific heat and magnetization were derived by Onsager for, for 10 points, what model of ferromagnetism on a square lattice?

ANSWER: two-dimensional Ising model [prompt on partial answer; any other dimension is demonstrably wrong at all points]

9. This composer used a Richard Rive text concluding “It’s music that we are going to sing, where the rainbow ends” for his cantata responding to the 9/11 attacks, *Voices From Silence*. Another piece composed by this man is based on a theme beginning with the notes A-high E-high G-high E, which is played by a solo English horn before being recapitulated more dramatically by a wordless soprano. He did the music for a Joan Baez song about Sacco and Vanzetti, (*) “Here’s to You,” and depicted a man who gets his instrument broken by some natives in “Gabriel’s Oboe.” A search for valuable coins in a grave is the backdrop for his piece “The Ecstasy of Gold.” This composer’s most iconic theme opens with a howling flute oscillating between A and D that is answered by a three-note “wah-wah-wah” response. For 10 points, name this Italian composer of film scores to spaghetti westerns like *The Good, The Bad, and the Ugly*.

ANSWER: Ennio Morricone

10. This character attends a performance of Gilbert and Sullivan’s *Patience* with a friend who is only excited by the electricity in the Savoy Theater. This character applies the label “idiot child” to Robinson Ellis, who appears on stage with a scooter and lollipop. This character writes about a “young sinner with handcuffs on his wrists” who goes to prison for the “colour of his hair” to commemorate the (*) trial of his major foil, Oscar Wilde. This expert Manilius translator forgets to time a race because he is distracted by watching his best friend and love interest, an athletic science student named Moses Jackson. At age 77, this classical scholar looks back on his younger self while crossing the River Styx in Charon’s boat. For 10 points, name this protagonist of Tom Stoppard’s *The Invention of Love*, also the author of such poems as “Epitaph on an Army of Mercenaries,” “When I was One-and-Twenty,” and “To an Athlete Dying Young.”

ANSWER: Alfred Edward Housman [or Professor Housman]

11. A Gareth Evans paper titled for a theory of these things challenges earlier theories by citing Marco Polo’s first visit to Madagascar. Keith Donnellan used the example of Santa Claus to show how the “historical chains” for these things could end in a block. John Searle presented a “cluster theory” of these entities in a paper that argued they are associated with a “sufficient but so far unspecified number” of statements. Russell argued that these things were (*) “disguised definite descriptions,” in contrast to the “Millian” theory of these things, according to which they have reference and not sense. A key doctrine in Confucian philosophy concerns the “rectification” of these words. For 10 points, name these words that Saul Kripke claimed were rigid designators, and which are exemplified by the word “Scott” in reference to “the author of *Waverley*.”

ANSWER: proper names [prompt on answers like proper noun; if somebody buzzes in with references or referents, prompt them on the grounds that some people do think they’re the same as references]

12. In one attempted proof of this theorem, William Osgood took issue with the implications when the boundary is not a simply closed Jordan curve; in that attempt, Axel Harnack used what is now Harnack’s theorem and established the existence of a Green’s function. One method of proving this theorem involves taking the normal family of analytic functions that send a fixed z -naught to zero and finding a member function with the supremum value for f prime of z -naught; modern methods of proving it often involve using a form of the Schwarz lemma. The namesake of this theorem coined the name for (and arguably relied on) the result from potential theory now called Dirichlet’s principle(*), which can be used to complete the existence proof for this theorem. The uniformization theorem can be seen as the same result for surfaces as this theorem gives for plane regions. For 10 points, name this theorem first described in its formulator’s 1851 PhD thesis, which shows the existence of a bijective holomorphic function which takes a non-empty simply connected open subset of the complex numbers onto the open unit disk.

ANSWER: Riemann mapping theorem

13. As Attorney General, this man tried and failed to exclude the “Raging Reporter from Prague,” Egon Kisch. This leader’s government eliminated the ludicrously difficult dictation test used to exclude Chinese immigrants from his country. His anti-communist policies gained public support after the defection of Soviet spy Vladimir Petrov, which H.V. Evatt insisted this man personally engineered. This Prime Minister claimed that the “real life of this nation” was neither in “luxury hotels” nor “organized masses,” but in the quiet middle class, whom he called the (*) “Forgotten People.” He claimed his opponents in the Labour Party were controlled by “36 faceless men.” Succeeded by his Treasury Minister Harold Holt, this leader served a total of 18

years over two terms, in the first of which Winston Churchill dragged his country into World War II. For 10 points, name this longest-serving Prime Minister of Australia.

ANSWER: Robert Gordon Menzies

14. In an interview about his country's food system, the leader of this party recalled a visit to Guatemala where he saw helicopters dump pesticides on bananas. Two members of this party were expelled for complaining about its lack of internal democracy on TV, while another produced the videos "Prometheus" and "Gaia." This party organizes "Meetups" to discuss issues and hosts "V-Days," during which participants sign initiatives in order to (*) criticize the government. This civic list-organized party's major pillars are development, environmentalism, sustainable transportation, public water and internet connectivity, although it is also known for its opposition to campaign contributions and the eurozone. This party won one hundred and nine seats in the 2013 general election against its major rivals, the PD and PDL, after a huge meeting in Piazza San Giovanni. For 10 points, name this social network and blog-driven Italian political party founded by the comedian Beppe Grillo.

ANSWER: Five Star Movement [or MoVimento Cinque Stelle; or M5S]

15. In this novel, a woman starts taking three enemas every day to pacify her sexual desires, aroused by her twin habits of eating chocolate and sleeping with a slave named Judas Iscariote. In 2008, Peter Eotvos adapted this novel into a quadrilingual opera. A nobleman in this novel never has sex with his wife Dona Olalla before Dulce Olivia kills her with a magic thunderbolt. The protagonist of this novel recites poems written by his ancestor Garcilaso de la Vega to a woman who was consecrated to the (*) Yoruban god Olokun by the family slave who raised her, Dominga de Adviento. This novel begins during the opening of the crypts in the Convent of Saint Clara, where the workers discover a corpse whose copper hair has been growing for 200 years. In this novel, the priest Cayetano Delaura falls in love with Sierva Maria, whom he was assigned to exorcise after she contracted rabies from a dog. For 10 points, name this novella by Gabriel Garcia Marquez.

ANSWER: Of Love and Other Demons [or Del Amor y Otros Demonios]

16. This book's prophecy that "the Lord is coming with thousands upon thousands of his holy ones" is quoted by the Epistle of Jude. Noah appears as a white bull in this book's animal-based allegory of Israel's history. The "secrets of lightning" are revealed in a section of this book that describes a vision of the "Elect One" in a multitude before the "Head of Days" and "Lord of Spirits." Another section of this book forms the basis of a solar calendar used at Qumran. In the first section of this book, (*) Azazel teaches metalworking to mankind and joins other fallen angels led by Samyaza to impregnate mortal women and produce the Nephilim. This book, only fully extant in the Ge'ez language of Ethiopia, often addresses the title character's son Methuselah. For 10 points, name this apocryphal book that includes the Astronomical Book, Book of Dream Visions and Book of the Watchers, attributed to a great-grandfather of Noah who walked with God.

ANSWER: Book of 1 Enoch [accept the specific sections Book of the Watchers, Book of the Parables/Similitudes of Enoch, Astronomical Book, Book of Heavenly Luminaries, Book of Dream Visions and Epistle of Enoch before mentioned; accept Book of Henoah]

17. During a performance of one musical work of this type and number, the trumpeter Ernest Hall held a high B one bar longer than notated, which so pleased the composer that it has become a performance tradition. The finale of that piece features a theme that depicts the conductor Hans Richter. The third movement of another work of this type and number uses a solo horn and harp to depict the bard Bayan. That piece, which features a scherzo in the unusual time signature 1/1, was called by the critic (*) Vladimir Stasov a "heroic symphony." The score of one piece of this type and number features the Shelley quotation, "Rarely, rarely comest thou / Spirit of Delight!" That work was composed on the death of Edward VII. In addition to a work in B minor by Borodin and one in E-flat major by Elgar, works of this genre and number include one that contains the movement "Urlicht" and whose finale sets a poem by Friedrich Klopstock. For 10 points, give the type and number of these compositions, which include Mahler's "Resurrection."

ANSWER: second symphonies [or symphony no. 2 or equivalents]

18. Albert Williams gave religious tracts to residents of this place at a ceremony in their honor held by John Geary. It's not Greenwich Village, but a prostitute who became rich as a ship captain's mistress opened up a

chain of child brothels here on Waverly Place. This location was the center of the first bubonic plague epidemic in the US. The Six Companies redesigned this place to prevent Eugene Schmitz' attempt to relocate it away from a financial district. The heart of this location was a plaza called (*) Portsmouth Square in which its state's first public school was built. The demographics of this place became less disproportionately male with the influx of "paper sons" and "paper daughters." Denis Kearny threatened to manufacture balloons to drop dynamite on this place. Early immigrants to this major site of the tong wars were encouraged by the Burlingame Treaty, and many later ones passed through Angel Island. For 10 points, name this name this enclave of San Francisco whose population grew after the repeal of an 1882 Exclusion Act.

ANSWER: San Francisco's Chinatown [accept Little Canton; prompt on San Francisco or California or other less specific answers, like the US; antiprompt on parts of Chinatown like Portsmouth Square]

19. In one story by this author, a steel-loving MIT grad quits his job as an insurance clerk to go to Tennessee, where he returns a year later after an expedition to Peru. In another story by this author of "The Sensible Thing," Ardita Farnam throws *The Revolt of the Angels* at her uncle before her yacht, the *Narcissus*, is hijacked by a colonel's son. A more famous story by this author centers on a girl who quotes "Kubla Khan" before getting lost in a building and seeing a ghost; that character hails from Tarleton, Georgia and breaks off her engagement to a (*) Yankee with whom she visits a Confederate cemetery and a winter carnival. This author also wrote a story in which an Italian teacher escapes from a prison of aviators shaped like a glass bowl that later explodes. In that story, a boy from Hades, Mississippi travels with his friend from St. Midas' prep school, who lives in an enormous château in five miles of unsurveyed territory, where his grandfather found a mountain-sized jewel. For 10 points, name this author of "The Offshore Pirate," "The Ice Palace" and "The Diamond as Big as the Ritz."

ANSWER: Francis Scott Key Fitzgerald

20. Hawthorne and Emmons determined that the rate-determining step of the most notable reaction involving these molecules is the acid-catalyzed decomposition of their adduct with a ketone. Reacting one of these molecules with an enolsilane produces a zwitterionic intermediate that rearranges to a protected alpha-hydroxy ketone; this is the Rubottom oxidation. One of these molecules is employed to prepare an N-oxide for a pericyclic reaction that produces a Hofmann alkene and a hydroxylamine. That example of one of these molecules is reacted with ketones to produce esters and with alkenes to stereoselectively produce epoxides through a "butterfly mechanism." These molecules are produced by reacting an acyl halide with sodium percarbonate or a carboxylic acid with hydrogen peroxide. For 10 points, name these oxidizing agents exemplified by mCPBA and used in the Prilezhaev reaction and Baeyer-Villiger oxidation, which have an extra oxygen atom between their carbonyl and hydroxyl groups.

ANSWER: peroxyacids [accept peracids; accept specific peroxyacids, especially mCPBA or meta-Chloroperoxybenzoic acid (before mentioned); prompt on acids but don't accept carboxylic acids; prompt on peroxides; prompt on nonspecific answers like oxidizing agents]

EXTRA. Larson *et al* noted that the holotype fossil of this species displays only one hundred and ten degrees of humeral torsion and concluded that it had a protracted scapula. This species, whose fossil record unusually stretches as recently as thirteen thousand years ago, likely primarily hunted a subspecies of *Stegodon*. Falk *et al* created endocast maps of this species that led them to reject the pelvis-smashing, femur-stealing Teuku Jacob's pathological explanation for its holotype fossil. Fossils of this species may represent sufferers of (*) Laron syndrome. Mirror-image reconstructions of the chinless face of the LB one fossil of this species reveal significant asymmetry, which combined with its short femora and possible microcephaly have led Bob Eckhardt to claim that it represents a developmentally abnormal *Homo erectus* rather than a new species that has undergone insular dwarfism. For 10 points, name this real-life "hobbit" discovered in 2003, a tiny hominin named for its home on an Indonesian island.

ANSWER: *Homo* floresiensis [or Flores Man; prompt on Homo or hominins or primates or other less specific answers]

Bonuses:

1. This book distinguishes between "systematic education" and "educational projects" and later discusses "cultural invasion" as part of the "theory of antidiological action." For 10 points each:

[10] Name this book written from a Marxist perspective, which argues that the “banking model” of education perpetuates dehumanizing power relations in society.

ANSWER: **Pedagogy of the Oppressed** [or **Pedagogia do Oprimido**]

[10] Like *Pedagogy of the Oppressed* author Paolo Freire, this Italian creator of the *Casa dei Bambini* challenged educational paradigms. Her method, practiced in schools bearing her name, stresses the child’s freedom to develop as a human over four planes.

ANSWER: Maria Tecla Artemisia **Montessori**

[10] Another Italian educational philosopher, Loris Malaguzzi, developed this approach named for a town between Parma and Modena. This method stresses the role of the environment as the “third teacher.”

ANSWER: **Reggio** nell’**Emilia** approach

2. Very dubious examples of these entities note that one person heard a talking donkey tell them the information in question. For 10 points each:

[10] Name these chains of narrators that *muhadithin* can use to verify the objects of their studies. These lists, which precede the *matn*, should be composed of authoritative people.

ANSWER: **isnad** [or **sanad**]

[10] An *isnad* is part of one of these reports of the actions and judgments of Muhammad, the most important basis for *fiqh* and *tafsir* after the Quran.

ANSWER: **ahadith**

[10] Sunni Orthodoxy acknowledges this many authentic collections of *hadith*, the most trusted of which is the *sahih* al-Bukhari. Some Muslims earn extra credit after Ramadan by fasting on this many days during Shawwal.

ANSWER: **six**

3. According to his biographer, Bana, this king personally rescued his widowed sister Rajyasri from her funeral pyre after invading a neighboring kingdom to save her. For 10 points each:

[10] Name this 7th-century Indian emperor who united the northern Thanesar and Kannauj kingdoms, but was stopped from invading southern India by Pulakesi II at the Narmada River.

ANSWER: **Harsha** Vardhana

[10] Harsha united a northern India that had been fragmented after the fall of this dynasty. A king of this dynasty sometimes called “Vikramaditya” set up the Iron Pillar and lent his patronage to Kalidasa.

ANSWER: **Gupta** Dynasty

[10] This Chinese monk recounted Harsha’s defeat at the Narmada River as part of the *Great Tang Records on the Western Regions* that he wrote in his 17 years of travelling through India, which were inspired by Faxian.

ANSWER: **Xuanzang**

4. This thinker’s writing preserves the idea of *prohairesis*, a faculty of human volition in a world where “some things are out of our control.” For 10 points each:

[10] Name this author of the *Anabasis of Alexander*. He compiled the *Discourses* of his Roman master.

ANSWER: **Arrian**

[10] Arrian’s writings on Epictetus preserve a Roman example of this philosophical school whose sympathizers included Cicero, Seneca the Younger, and Marcus Aurelius.

ANSWER: **Stoicism**

[10] This American analytic skeptic rigorized Stoic argumentation for his dissertation-turned-book *Stoic Logic*. This man names a problem involving the exchangeability of synonyms, which he discussed in his paper “Synonymity.”

ANSWER: Benson **Mates**

5. This character addresses calls himself “alone the villain of the earth” and addresses the moon as the “sovereign mistress of true melancholy” before killing himself for deserting his master. For 10 points each:

” For 10 points each:

[10] Name this Shakespeare character, who also famously declares that “age cannot wither her, nor custom stale her infinite variety” in a speech beginning, “The barge she sat in, like a burnish’d throne, burned on the water.”

ANSWER: Domitius **Enobarbus**

[10] Enobarbus ultimately decides to leave the service of this other character, who cries, “I am dying, Egypt, dying” in his climactic death scene.

ANSWER: Marc Antony

[10] In Act II of *Antony and Cleopatra*, a besotted Lepidus asks Antony to describe this kind of animal, which Antony says “is shaped, sir, like itself, and is as broad as it hath breadth.” Lewis Carroll parodied Isaac Watts’ “Against Idleness and Mischief” in a poem about one of these animals included in *Alice’s Adventures in Wonderland*.

ANSWER: a crocodile

6. Its key step is the phosphorylation of the Cdc25A phosphatase, leading to Cdc25A’s ubiquitination and subsequent degradation by the proteasome, for 10 points each:

[10] Name this component of the cell cycle in which E2F induces expression of cyclin E, allowing for DNA replication to occur.

ANSWER: G1/S checkpoint [or restriction checkpoint, do not accept or prompt on just “G1” or “S”, do not prompt on “S checkpoint”]

[10] This other part of the cell cycle sees the formation of a cleavage furrow in animals and is regulated by polo-like kinases, which play a role in actin-ring formation. It follows telophase.

ANSWER: cytokinesis

[10] During cytokinesis in plants, this structure, unique to embryophytes, is responsible for transporting vesicles to the midzone of the cell, allowing for formation of the cell plate.

ANSWER: phragmoplast

7. The title figure of this painting was inspired by a Sudanese corn bin and unusually has both a horned head and tail. For 10 points each:

[10] Name this painting that depicts a headless female statue with a yellow and orange glove in front of a dark grey mechanical beast. This painting’s title was derived from a nursery rhyme.

ANSWER: *The Elephant* Celebes

[10] Unlike that elephant painted by Max Ernst, those painted by fellow surrealist Salvador Dalí are reflections of these animals. Correggio and Rubens are some of the many artists to paint one of these animals erotically draped over the nude Leda.

ANSWER: swans [accept Cygnus; prompt on Anatidae or birds or chordates or other less specific answers]

[10] This recently-deceased artist’s *Leda and the Swan* is, like most of his works, a bunch of squiggles. He was also inspired by the classics to do a set of eight squiggles of the word “Virgil.”

ANSWER: Cy Twombly

8. Paintings on the walls of this structure show nobles at a symposium engaged in activities like playing the lyre or the *kottabos* game. For 10 points each:

[10] Name this site discovered by Mario Napoli at Paestum, which contains the only surviving example of early Greek wall painting of human subjects. Its roof slab shows a young man jumping into some water.

ANSWER: Tomb of the Diver [or Tomba del tuffatore]

[10] The Tomb of the Diver is located in Campania, south of the tombs built by these people in Lazio. These people constructed multi-cella temples to Menrva, Uni and Tinia in such cities as Veii.

ANSWER: Etruscan civilization

[10] Perhaps the best-known non-fraud work of Etruscan sculpture is an awesome bronze depiction of this creature, inscribed with the word “Tiniscvil” and found in Arezzo.

ANSWER: Chimera of Arezzo

9. The so-called Sagnac effect in interferometry is associated with gyroscopes of this kind. For 10 points each:

[10] Name these devices that transmit information on the principle of total internal reflection, generally using silica waveguides. They are especially useful for high-speed long-distance transfer of information.

ANSWER: fiber optics [or optical fibers; prompt on partial answers]

[10] For his work on fiber optics, this colleague of George A. Hockam, who co-wrote the 1966 IEEE [I triple E] paper “Dielectric-fibre surface waveguides for optical frequencies,” earned the 2009 Nobel in Physics.

ANSWER: Charles Kuen Kao [accept Gao Kun]

[10] In the “Key Discovery” section of his Nobel lecture, Kao described how waveguides made from these materials failed because the confinement was not strong enough. These materials are often made by sputtering or vapor deposition and are used in optical coatings.

ANSWER: thin films [prompt on partial answer]

10. Totalitarian states employed cultural diversions to keep their populations happy. For 10 points each:

[10] Aryan boys could fulfill their scouting needs with this male counterpart of the Nazi Party’s League of German Girls, which they joined after graduation from the German Young People. This essentially compulsory organization stressed “military athletics” and singing chants in honor of the Führer.

ANSWER: Hitler Youth [or Hitler-Jugend; or HJ]

[10] Older members of the master race could get in on the Nazi-approved fun with this Robert Ley-led leisure organization, which sponsored cruises to the Norwegian fjords on the *Wilhelm Gustloff* before it sank in 1945.

ANSWER: Strength Through Joy [or Kraft durch Freude; or KdF]

[10] The equivalent of Strength Through Joy in fascist Italy was *Dopolavoro*, which financed these discount vacation vehicles for urban workers, the subject of a 1933 Matarazzo film shot in Orvieto.

ANSWER: treni popolari [accept popular trains]

11. This scholar and his pupil Aristarchus marked line 296 of the last book of the *Odyssey* as its real ending, and invented the asterisk as a way of noting repeated lines in the Homeric text. For 10 points each:

[10] Name this scholar who succeeded Eratosthenes as head of the Library of Alexandria. He invented a mid-level dot that served as the predecessor to the modern comma, and he also innovated the use of accents to denote the different tones of Ancient Greek.

ANSWER: Aristophanes of Byzantium [prompt on Aristophanes]

[10] Aristophanes is also the name of a far more famous Athenian playwright. In this Aristophanes play, Pheidippides beats up his father Strepsiades after learning sophism from Socrates at the Thinkery.

ANSWER: *The* Clouds

[10] In this Aristophanes play, Praxagora gets the women of Athens to disguise themselves as men and vote themselves into power so that they can impose glorious socialism.

ANSWER: *The* Assembly-Women [or Ecclesiazusae]

12. Answer the following questions about doubly-eponymous equations of state for fluids, and their corresponding predictions of vapor pressure. For 10 points each:

[10] Name this doubly eponymous two-parameter cubic equation of state developed in 1946 as an improvement upon the van-der-Waals equation of state. It is most correct for gases whose acentric factors are close to zero.

ANSWER: Redlich-Kwong equation of state

[10] Also doubly-eponymous, this method allows the estimation of the vapor pressure of a liquid at a given temperature if the critical pressure, critical temperature, and acentric factor of the gas is known. Two intermediate coefficients f_0 [F-NAUGHT] and f_1 are calculated in the model as sixth-order polynomial functions of the reduced temperature.

ANSWER: Lee-Kesler method

[10] The alpha-factor was first introduced in Soave’s correction to the Redlich-Kwong equation of state, but it was later used in this doubly-eponymous equation of state developed in 1976 as an alternative to the Redlich-Kwong equation.

ANSWER: Peng-Robinson equation of state

13. In a short story by this writer, the title apparition tells Andrey Kovrin that his body cannot serve as the “mortal garb of genius” as Kovrin experiences a fatal hemorrhage. For 10 points each:

[10] Name this Russian author of stories like “The Black Monk,” “Gooseberries,” and “The Lady with the Pet Dog.”

ANSWER: Anton Pavlovich Chekhov

[10] This author wrote a version of “The Lady with the Pet Dog” from the perspective of Anna Sergeyevna. This author of stories like “Ich Bin Ein Berliner,” “Convalescing,” and “Little Wife” also created a girl who spots a boy in a gold jalopy while out on a dinner date with Eddie.

ANSWER: Joyce Carol Oates

[10] A Chekhov-inspired dog named Kashtanka appears in this novel, presented in reverse chronological order. In its last section, Yolanda hides a stolen kitten named Schwarz in a drum she habitually beats to drown out its moans.
ANSWER: **How The Garcia Girls Lost Their Accents**

14. Answer the following about composers who wrote or planned sets of works covering all 24 major and minor keys, for 10 points each.

[10] This composer's opus 11, like Chopin's opus 28, was a set of preludes in every key, but he is better known for his *Prometheus: The Poem of Fire*, his theosophical views, and his ambition to end the world with his unfinished *Mysterium*.

ANSWER: Alexander **Scriabin**

[10] The composer of these works intended to write one in each key but only completed fifteen. The C-minor eighth of these works was dedicated "to the victims of fascism and war" and opens with the composer's signature DSCH motif.

ANSWER: Dmitri **Shostakovich's string quartets** [prompt on partial answer]

[10] The opus 35 and 39 of this French pianist and composer are sets of etudes in every major and minor key, respectively. The latter contains his Symphony for Piano Solo and Concerto for Piano Solo.

ANSWER: Charles-Valentin **Alkan**

15. Carol Channing debuted this show's title character, a New York socialite who can pull out business cards advertising super-specific areas of expertise at the drop of a hat. For 10 points each:

[10] Name this musical about a widowed matchmaker who seeks to marry Horace Vandergelder. In its title song, famously covered by Louis Armstrong, several waiters exclaim "It's so nice to have you back where you belong."

ANSWER: **Hello, Dolly!**

[10] The character of Dolly originated in this author's plays *The Matchmaker* and *The Merchant of Yonkers*. He also wrote a historical epistolary novel about the murder of Julius Caesar.

ANSWER: Thornton **Wilder**

[10] In this song from *Hello, Dolly!* Cornelius and Barnaby flee their storeroom jobs in Yonkers and hop the train to New York with Dolly, promising "We won't go home until we've kissed a girl!"

ANSWER: **"Put On Your Sunday Clothes"**

16. Answer the following about sex and repression in Victorian America, for 10 points each.

[10] This 19th-century Presbyterian minister promoted a vegetarian diet and consumption of whole wheat bread as methods of purifying oneself of sexual urges so as not to go blind through masturbation.

ANSWER: Sylvester **Graham** [of Graham Cracker fame]

[10] This founder of the New York Society for the Suppression of Vice was an anti-birth control crusader who passed a namesake obscenity law. He shares his name with a famous "lode" of silver.

ANSWER: Anthony **Comstock**

[10] This popular feminist magazine was founded by two free love-loving sisters, one of whom had run for president with Frederick Douglass. This magazine sparked a landmark adultery trial by exposing Henry Ward Beecher's sex scandal.

ANSWER: **Woodhull & Claflin's Weekly**

17. This goddess may have originated as a plague-carrying tigress, but later became a personification of *yin* as the consort of Mu-Gong. For 10 points each:

[10] Name this "Queen Mother of the West" who owns the three-legged raven Qingnaio. This goddess hands out peaches ripened over three thousand years in the garden of her palace at Mount Kunlun.

ANSWER: **Xi Wang Mu** [accept variants like **Hsi Wang Mu**; accept **Yaochi Jinmu**]

[10] Xi Wang Mu's peaches confer this trait, which is also possessed by eight Daoist heroes with jade handmaidens. Chiron gave up this trait after he was poisoned by an arrow dipped in hydra blood.

ANSWER: **immortality** [accept equivalents]

[10] Immortality is also presumably possessed by this "Divine Farmer" who domesticated the horse and ox and invented the plow and cart. This mythical emperor catalogued three hundred and sixty five medicinal herbs, including tea, and taught agriculture to mankind.

ANSWER: **Shen Nong**

18. One example of this weather phenomenon called the *leveche* carries red dust into the skies of southern Spain. For 10 points each:

[10] Name this southerly wind which picks up hot, dry air over the Sahara desert and blows across the Mediterranean. Examples of it which reach Europe are usually southeasterly.

ANSWER: sirocco [accept any of the following: jugo, siroc, xlokk, xaloc, ghibli, simoom, chili, khamisin, gharbi, gibla]

[10] Sirocco winds usually hit this island nation from the southeast. Its namesake Semitic language is written with the Roman alphabet.

ANSWER: Republic of Malta [or Repubblika ta' Malta]

[10] This Tunisian gulf is often the source of springtime gale-force siroccos called *gharbi*. The cities of Ghannouch and Djerba are on this gulf, which is due south of Sfax.

ANSWER: Gulf of Gabes [or Gulf of Capes; or Gulf of Gaps]

19. Answer the following about black history- eighteenth-century British black history, that is. For 10 points each:

[10] The early black community that developed in this city in the 1730s was greatly augmented by freed black American immigrants after the Revolutionary War. In the 18th century, it grew from its participation in the slave trade.

ANSWER: Liverpool

[10] British abolition was achieved in part due to the work of black public intellectuals like this playwright and composer educated by the Montagu family. This Richard Garrick fan's influential letters included an account of the Gordon riots.

ANSWER: Ignatius Sancho

[10] Sancho enjoyed a much more privileged life than the slaves of this shipbuilding colony, which was built up after George Somers' fleet was shipwrecked in an incident that inspired *The Tempest*.

ANSWER: Bermuda

20. Examples of them include basaltic and andesitic. For 10 points each:

[10] Name these products of volcanic eruptions, extrusions of molten rock often classified as pahoehoe(pa-HOY-hoy) or aa(AH-ah).

ANSWER: lava flows

[10] After a lava flow cools, it contracts and fractures into these objects, which usually have a hexagonal cross-section. Examples of them can be seen at Yellowstone Park and at the Giants Causeway.

ANSWER: columnar jointing

[10] This type of lava is the most viscous, has silica content of around 70%, and can erupt at temperatures as low as 650 degrees Celsius. Like dacite lava, it can form lava domes, and especially viscous samples form its namesake spires.

ANSWER: rhyolitic lava (accept rhyolite lava)

Extra. The narrator of this novella gets help on his arithmetic from tigers with beautiful voices after they eat his parents. For 10 points each:

[10] Name this disquieting novella about the picturesque community of iDEATH, which features a trout hatchery, an abandoned bridge and the Forgotten Works, where InBOIL makes whiskey from forgotten things.

ANSWER: In Watermelon Sugar

[10] In accordance with the author's childhood dream, this novella by the author of *In Watermelon Sugar* and *Willard and His Bowling Trophies* ends with the word "mayonnaise." It does not have a clear plot, but it's mostly set in San Francisco and the Pacific Northwest.

ANSWER: Trout Fishing in America

[10] Trout appear with "vermiculate patterns that were maps of the world in its becoming" on their backs at the end of this Cormac McCarthy novel chronicling a father and son's journey across a post-apocalyptic landscape.

ANSWER: *The Road*

