



ACADEMIC COMPETITION FEDERATION

2014 ACF NATIONALS
PACKET BY VIRGINIA

TOSSUPS

1. The cartoonist Stop satirized this painting in a sketch offering a correction to “repair” a notable “omission.” TJ Clark’s analysis of this piece claims the main figure’s face refused to show any affect since it prevents her class from being revealed. This work was completed right after the artist controversially received the Legion of Honor through the influence of Antonin Proust and originally belonged to the artist’s neighbor, composer Emmanuel Chabrier. The aesthete Gaston La Touche was the model for a man with a top hat and a cane on the right side of this painting, which is housed at the Courtauld Gallery in London. The artist inscribed his signature on a bottle of rose wine on the far left hand side next to a bottle of Bass Pale Ale and three bottles of champagne, while a bowl of Mandarin oranges appears below the main female, who is shown standing in front of a mirror. For 10 points, name this 1882 Manet masterpiece that centers on an apathetic barmaid at the title Paris nightclub.

ANSWER: A BAR AT THE FOLIES-BERGÈRE [or Un BAR AUX FOLIES BERGÈRE]

2. The counterintuitive growth of r-modes in the CFS instability results from an object occupying a more favorable energetic state despite losses due to this phenomenon. In cosmological string theory, loops formed from line-like topological defects disintegrate as a consequence of this phenomenon. In the quadrupole approximation, the luminosity of this phenomenon is proportional to the sum of the squares of the third time derivatives of the components of the quadrupole tensor. This phenomenon generates the B-mode polarization in the cosmic microwave background. The so-called “period gap” observed in cataclysmic variables is believed to be due to a transition from magnetic braking as a mechanism of angular momentum loss to this phenomenon. The orbit of the Hulse-Taylor binary is decaying as a consequence of this phenomenon, which results from propagating solutions to Einstein’s field equations. For 10 points, identify this phenomenon which is sought after by experiments like LIGO, and which is produced by the acceleration of massive bodies.

ANSWER: GRAVITATIONAL RADIATION [accept equivalents like GRAVITY WAVES]

3. This author wrote a story in which a chicken breeder on a farm vainly tries to recover the 25 pounds he spent exhuming a corpse that turned out not to be his brother’s body. In another story, a woman yells at her new husband for making a vendor run after their train and offer half price for a beautifully-carved lion with real fur. This writer interspersed quotes from the Reverend Henry Callaway between chapters of a novel that opens as a circle of children disobey a landowner by playing with eleven freckled guinea-fowl eggs. This author of “Six Feet of the Country” wrote a novel in which hypocritical lefties at the L.A. Cafe mock Julie Summers for dating an illegal immigrant with an economics degree, an Arab mechanic named Abdu. This author wrote a novel in which the homosexual Terry gives clothes to the workers on his father’s 400-acre farm where Jacobus buries the corpse of an unknown black man that comes to haunt the title white businessman, Mehrling. For 10 points, name this South-African author of *The Pickup* who wrote *The Conservationist* and *July’s People*.

ANSWER: Nadine GORDIMER

4. One captain in this navy was the subject of Samuel Eliot Morison’s Pulitzer Prize winning book subtitled “A Sailor’s Biography.” Barbara Tuchman’s *The First Salute* takes its title from an encounter of this navy’s ship, the *Andrew Doria*, with the island of Saint Eustatius. One of this navy’s fleets was nearly eliminated by General Carleton and Thomas Pringle at the Battle of Valcour Island. Its disorganization allowed the escape of the outnumbered *Glasgow* in a nighttime engagement off Block Island. Its commander Esek Hopkins was relieved for unfairly splitting loot after its successful raid on Nassau. Its most famous officer captured the HMS *Serapis* in the Battle of Flamborough Head after declaring “I have not yet begun to fight.” For 10 points, name this short-lived navy disbanded by 1785, which employed the *Bonhomme Richard* captain John Paul Jones.

ANSWER: CONTINENTAL NAVY [prompt on “United States navy” or “American navy”]

5. A celebration of the birth of this god begins with the youngest female member of the family applying the red reeka mark to the male members of the family. In one ritual celebrating him, the Sunderkand is read aloud. The worship of this god was popularized by a Hindi language work of Tulsidas which has a name reflecting a “sacred lake” of his deeds. During a festival named for this god, idols of him are taken out of temples and paraded across the streets in a chariot procession before the gathered onlookers swim in the Sarayu river. Hindus often repeat this god’s name twice as a greeting and frequently invoke him at death, as Gandhi did after being fatally shot. He is depicted wearing a conical hat called the Kiritamukuta and holding a bow with his left hand and an arrow with his right. The holy city of Ayodhya was this god’s birthplace. For 10 points, name this incarnation of Vishnu frequently worshipped alongside his wife Sita.

ANSWER: RAMA [prompt on “Vishnu”]

6. Near the end of this symphony, the trumpets play D-E-F sharp-G, finally adding a fourth note to an omnipresent three note motif introduced in its first movement by the strings playing F-sharp-G-A. The second movement of this symphony begins with a long pizzicato passage played by double basses and cellos, and later features a C-major theme above which the word “Christus” was written. In its finale, the oboe repeats a note nine times before introducing a motif inspired by the suicide of the composer’s sister-in-law. The D minor bassoon theme in this symphony’s second movement *Tempo andante, ma rubato* occurred to the composer as he was being haunted by a vision of Don Juan. Because this symphony was begun while its composer was living in Italy, thanks to the generous donations provided by its dedicatee Axel Carpalan, it largely avoided Russian influence and became popular with patriots in his homeland. For 10 points, name this 1902 symphony in D major, the most frequently recorded and performed by Jean Sibelius.

ANSWER: SIBELIUS’S SYMPHONY NO. 2 in D major, Op. 43 [or SIBELIUS 2; or SIBELIUS’S D MAJOR SYMPHONY before it’s mentioned at the end; or SIBELIUS’S OP. 43; prompt on all of those answers that don’t mention Sibelius if they are given before the end of the question, AT THE END OF THE QUESTION, accept: SECOND symphony, Symphony No. 2, OP. 43]

7. This scientist came up with a “geological thermometer” to determine at what temperature various minerals deposited salts on the ocean floor. By setting the derivative of Gibbs free energy with respect to extent of reaction equal to change in G plus the product of the gas constant, temperature, and the natural log of the reaction quotient, one can compute the value of G using this man’s isotherm. He was censured for his book *Chemistry in Space*, in which he proposed imagining the bonds of a carbon atom pointing to the corners of a tetrahedron, in the earliest elucidation of stereochemistry. This scientist’s namesake equation sets the standard enthalpy change over R T squared equal to the derivative of the natural log of the equilibrium constant with respect to temperature. This winner of the first Chemistry Nobel names a quantity used to denote the number of particles a solute contributes to a solution, symbolized lower-case “i.” For 10 points, name this Dutch physical chemist and namesake of a “factor” impacting colligative properties.

ANSWER: Jacobus Henricus VAN ‘T HOFF

8. One character in this play dramatically delays a piece of news by reporting it with a syntactically convoluted sentence beginning “I heard someone saying, though I was pretending not to listen, as I was passing the game tables where the oldest old men sit.” The poems “The Cat” and “Scottsboro, Too, Is Worth its Song” appear in a collection otherwise devoted to Countee Cullen’s abridged translation of this play. One character in this play gives a soliloquy lambasting the “men from long ago” for indulging in banquets and music to escape the sorrow of life. A man who receives the prophecy to “not loose the wineskin’s pendant neck” is offered fertility-boosting drugs by the title character in exchange for safe haven in Athens. This play begins with an Attendant interrupting the Nurse as she dreads the coming events, and ends with the title character leaving the stage in a dragon-pulled chariot. After successfully delaying banishment from the court of Corinth for one day, its title character sends out two poisoned golden robes as gifts, and rushes offstage to kill her sons. For 10 points, name this Euripides tragedy about Jason’s serial killer ex-wife.

ANSWER: MEDEA

9. One leader of this political party appointed the Goldstone Commission to investigate an incident in which members of the AVF and AWB stormed the World Trade Centre in Kempton Park. Its leader agreed to allow British use of its country’s naval base in the Simonstown Agreement. A minister of information under this party named Connie Mulder became embroiled

in scandal for his plan to divert money from his country's defense budget to spend on propaganda. It came to prominence under Daniel Francois Malan, who advocated keeping out of World War II and distancing his country from the UK. Prime Ministers from this party include H.F. Verwoerd, who was assassinated in 1966. Through the Group Areas Act and the Land Acts, this party's leaders created the bantustans and provoked the Sharpeville Massacre. For 10 points, name this party led by P.W. Botha and F.W. de Klerk, which is notorious for instating Apartheid in South Africa.

ANSWER: NATIONAL PARTY of South Africa

10. This philosopher reworked his paper "The Idea of Public Reason Revisited" into the second half of a book laying out eight principles for interactions among nations. This philosopher cited Kenneth Arrow to argue that good institutions form through a "four-stage sequence" of prior philosophizing, constitution-formation, legislature-selection, and bureaucracy-creation. This author of *The Law of Peoples* rejected utilitarian measurements of happiness, instead creating a list of "primary goods" valued by citizens, whom he argued possessed "two moral powers" that include following a "conception of the good." Michael Sandel criticized this philosopher's Kantian approach in a book on the "limits" of his most famous subject. This philosopher argued that without prior knowledge, people would maximize the amount of utility accorded to those lowest in status, in a thought experiment in which humans engineer society from behind a "veil of ignorance." For 10 points, name this liberal philosopher who conceived of the "original position" and the "difference principle" in *A Theory of Justice*.

ANSWER: John RAWLS

11. According to an unpopular hypothesis about this phenomenon, panal, which is present in decanoic and dodecanoic ester forms as PS-A and PS-B, undergoes a cyclization reaction to produce it. An oxygen-18 labeling experiment confirmed that one instance of this phenomenon used dioxetanone as an intermediate. An enzyme involved in this phenomenon is biotinylated, allowing it to be affixed to a cell surface, in an assay detecting the efflux of ATP from a cell in real-time. Population-dependent quorum sensing causes transcription of an operon resulting in this phenomenon in the newly re-classified bacteria *Aliivibrio fischeri*. Alexander Krichevsky's team produced the iconic photograph of a tobacco plant genetically engineered to express this phenomenon, which results from reactions catalyzed by luciferase. For 10 points, name this phenomenon by which fireflies and other organisms produce light.

ANSWER: BIOLUMINESCENCE [or CHEMILUMINESCENCE; prompt on "luminescence"; do not accept "photoluminescence" or "phosphorescence" or "fluorescence"]

12. This woman's popularity suffered when her friend Pierre de Brézé led a raid on the town of Sandwich on the pretense of coming to her aid. According to legend, she and her son were wandering lost through the woods when an outlaw gave her shelter in his cave. Another legend says she ordered a blacksmith to reverse the shoes on her horse so she could leave Muckleston without being traced. She was the daughter of Rene I, the titled king of Naples. This queen was an ally of William Beaufort, Duke of Somerset and William de la Pole, Earl of Suffolk. Though she was in Scotland at the time, she's been blamed for ordering the execution of the Earl of Salisbury on the day after the Battle of Wakefield. She was exiled to France four years after her husband was murdered in the Tower of London, and her son Edward died at the Battle of Tewkesbury. For 10 points, name this queen who waged the Wars of the Roses for the Lancastrians, alongside her husband Henry VI.

ANSWER: MARGARET OF ANJOU [prompt on "Margaret"]

13. During one festival celebrated in this country, pilgrims carry an effigy of the Virgin Mary from El Cisne to a shrine in Loja. One of its national dishes is a fish stew topped with pickled onions called encebollado. Unlike Mexico, the participants in its Day of the Dead drink a purple fruit and cornflower beverage called colada morada and eat child shaped rolls called guaga de pan. The Flightless Cormorant is only found on this country's Fernandina Island, which can be accessed by speedboat from Puerto Ayora, the capital of nearby Santa Cruz Island, while its largest island is Isabela Island. Its capital is the oldest in South America, and is situated on the slopes of the Pichincha volcano. Another volcano here, Mount Chimborazo, is the site most distant from the Earth's center. For 10 points, name this country which possesses the city of Guayaquil and the Galapagos Islands, as well as its capital of Quito.

ANSWER: ECUADOR

14. This man won an International Gold Medal for a piece Leonid Jakobson created for him based on the style of Auguste Vestris. Frederick Ashton created a role to "Rhapsody on a Theme of Paganini" for this man's last guest performance with

the Royal Ballet. This man's namesake "Arts Center" in New York was formed after the conclusion of his White Oaks Project for modern dance. Mark Morris' *The Hard Nut* copies this man's decision to eliminate the Sugar Plum Fairy role from *The Nutcracker*, a version of which this man performed for television with Gelsey Kirkland while principal dancer at the American Ballet Theater. This man was nominated for an Oscar for his performance in 1979's *The Turning Point*, and he worked with Twyla Tharp and Jerome Robbins after he defected to Canada from the Kirov Ballet. For 10 points, name this Russian-born American dancer who studied under George Balanchine and whose continued work to fuse classical and modern styles has gained him praise as one of the best dancers of all time.

ANSWER: Mikhail Nikolaevich BARYSHNIKOV [or Misha BARYSHNIKOV]

15. In the chapter "The Spell Seems Broken," this character agitatedly asks "What right have I given you to insult me," when a man begins to shower kisses on her arm. In successive fits, her father had beaten a horse and a servant boy, leading her to fear that he might beat her mother next. As a child, this character cuts her own hair, pushes her cousin into the mud, and runs away from home to join a band of gypsies, who take all her belongings before sending her home. This character is forced to return to St. Ogg's from her boarding school when her father loses an extended lawsuit. After reading *The Imitation of Christ*, she enters a phase of piety and self-denial that only ends when she reacquaints herself with the hunchbacked son of her father's archrival. She becomes involved in a love triangle with her cousin's suitor Stephen Guest and Philip Wakem. At the end of the novel this woman appears in, she drowns in the title river alongside her brother Tom. For 10 points, name this protagonist of George Eliot's novel *The Mill on the Floss*.

ANSWER: MAGGIE Tulliver [prompt on "Tulliver"]

16. According to legend, these people owned a magical cup with seven rings filled with an immortality-granting drink that could reflect any location in the seven heavens. One of these people planted four spears topped with slabs of meat on a raft, to which he tied starving eagles whose desperate flapping carried him into the sky. Another of them forced his son to run through two pillars of fire to prove that that son had not raped his stepmother Sudaba. Harpagus was forced to eat his own son at a banquet as punishment for exposing, rather than killing, one of these people as a baby. A more insane one of them murdered his brother Smerdis before dying from a thigh wound identical to the mortal one he dealt the Apis Bull. A wealthy king made war on one of these people after the Pythia ambiguously foretold the destruction of a great empire. In myth, these peoples included Jamshid, Kai Kobad and Kai Khosrow. For 10 points, name this set of rulers whose "book" recounts the legend of Rustam and Sohrab, and was written by Firdausi.

ANSWER: SHAHs of Iran [or KINGs of PERSIA; or KINGs of IRAN; or any answer referring to RULERS OF IRAN/PERSIA; prompt on "Persians" or "Iranians" or even "Medes"; prompt also on "kings"]

17. A work written by this scholar jointly with Rafael Nunez argues against philosophy's obsession with the "romance of mathematics," and is titled *Where Mathematics Comes From*. One work by this scholar argues that its title concepts are rooted in "multidimensional structures [which] organiz[e] experience into structured wholes," called "experiential gestalts." Another work by this scholar argues that knowledge is organized by means of "idealized cognitive models," and that the by-products of that organization give rise to "prototype effects." This social scientist collaborated with Mark Johnson on a book examining phrases like "argument is war" to show how figures of speech shape the way people conceptualize phenomena, and argued that the "strict father" and "nurturing parent" characterize conservative and liberal approaches to the title practice in his *Moral Politics*. Another of his books is titled for three objects contained in the *balan* category of the Dyirbal people of Australia. For 10 points, name this cognitive linguist who authored *Metaphors We Live By* and *Women, Fire, and Dangerous Things*.

ANSWER: George LAKOFF

18. The inductive heating power generated by eddy currents is directly proportional to the product of the magnetic permeability and this quantity, and in the skin effect which gives rise to those eddy currents, the penetration depth is inversely proportional to the square root of the product of the permeability, resistivity, and this quantity. The Kramers-Kronig relations express the real and imaginary parts of the dielectric function as a function of this quantity. The derivative of this quantity with respect to wavevector is the group velocity, and dispersion relations give this quantity as a function of wavevector. An RLC circuit resonates when this value for a driving EMF is equal to one over the square root of the product of capacitance and inductance. Below a critical value of this quantity, wave propagation does not occur in plasmas or in waveguides. For 10 points, identify this quantity measured in inverse-seconds, or Hertz.

ANSWER: FREQUENCY [accept ANGULAR FREQUENCY, which is just frequency times 2 pi]

19. This man pushed through a bill mandating that every health class in his state use the nutrition textbook he authored, *One Hundred Years of Health*. He engineered the election of Governor Ed Jackson, whose refusal to grant a pardon provoked this man to release “little black boxes” detailing every public official under his thumb. This continual nuisance to Hiram Evans used the pseudonym “Mr. W.B. Morgan” to check into a hotel room with a woman who slipped by his bodyguard Shorty to swallow six bichloride of mercury tablets. This man tried to claim that Madge Oberholtzer had committed suicide, rather than succumbing to a staph infection from the chew marks this man left on her breasts. For 10 points, name this Grand Dragon of the Indiana KKK, whose murder conviction led to the decline of the Klan nationwide.

ANSWER: D.C. STEPHENSON [or David Curtiss “Steve” STEPHENSON]

20. At one point in this poem the narrator wonders, “Perhaps an angel looks like everything / We have forgotten” after quoting a description of a face “rather angel than man” that presents “an unfamiliar stereotype.” The final stanza quotes Alban Berg’s description of a moment in Mahler’s 9th as “death itself” and the line from Cymbeline “There cannot be a pinch in death more sharp than this”. One notable metaphor describes an object as “life englobed” since it offers a false sense of depth that disguises the fact that “everything is surface”; and that metaphor culminates in the line: “An affirmation that doesn’t affirm anything.” In the final stanza the narrator addresses Francesco, imploring “I beseech you, withdraw that hand” in reference to the oversized right-hand that appears larger than the painter’s head in a certain Renaissance portrait. For 10 points, name this long ekphrastic poem about a Parmigianino painting by John Ashbery.

ANSWER: “SELF-PORTRAIT IN A CONVEX MIRROR”

TIEBREAKER

21. In one film, Lior Ashkenazi plays a man assigned to do this action who swims naked in the Dead Sea with Axel, a youth later revealed to be gay. That film about a man with this assignment is *Walk on Water*. The Stasi paid a woman with this job to publicly slap Kurt Kiesinger in the face. This was the vocation of Elliot Welles and the power couple Serge and Beate Klarsfeld. Another man known for doing this action sued Bruno Kreisky for libel in an affair that began after he attacked Kreisky’s selection of cabinet members. Working at this job, Simon Wiesenthal helped discover the true identity of Ricardo Clement. People with this occupation achieved the extradition of the “Butcher of Lyon” but failed to find the “Angel of Death.” For 10 points, identify this occupation of agents who continue to track down German geriatrics who formerly operated in the Third Reich.

ANSWER: HUNTING NAZIS [or KILLING NAZIS; or BRINGING NAZIS TO JUSTICE; or FINDING NAZIS; prompt on WORKING WITH THE MOSSAD or similar answers]

BONUSES

1. William Bent extended his trading empire by marrying into this tribe, but found tragedy when his son attempted to kill him to strike a blow against the U.S. For 10 points each:

[10] Name these Indians who, along with the Arapaho, were slaughtered in the Sand Creek Massacre by John Chivington's men.

ANSWER: CHEYENNE Indians

[10] This most aggressive of the seven Cheyenne military societies opposed Black Kettle's peace policies. This band led the charge against American encroachment before they were annihilated at the Battle of Summit Springs.

ANSWER: the DOG SOLDIERS [or DOG WARRIORS or DOG MEN]

[10] This famous leader of the Seventh Cavalry perpetrated the Washita Massacre, which killed the Cheyenne chief Black Kettle. He also graduated last in his class at West Point.

ANSWER: George Armstrong CUSTER

2. Answer these questions about the infamous Diels-Alder reaction, for 10 points each.

[10] The reaction is a 4+2 cycloaddition of the conjugated form of these compounds with two double bonds, with substituted alkenes termed their "philes."

ANSWER: DIENES

[10] In this non-preferred Diels-Alder transition state for electron-withdrawing dienophile substituents, the substituent is oriented away from the diene's pi electron system.

ANSWER: EXO

[10] The HOMO and LUMO of the dienophile are higher in energy than those of the diene in this variant of the Diels-Alder reaction, resulting in the breaking of three pi bonds and the formation of a pi and two sigma bonds.

ANSWER: INVERSE ELECTRON DEMAND Diels-Alder reaction [or IEDDA; or DA-INV; prompt on partial answer]

3. One of these animals says "I kill where I please because it is all mine," in a poem in which it muses: "It took the whole of Creation to produce my foot... Now I hold Creation in my foot." For 10 points each:

[10] Name this animal which is portrayed "roosting" in the aforementioned poem, and which hangs at the "master-Fulcrum of violence" in a poem depicting it "in the Rain."

ANSWER: HAWKS [accept "HAWK Roosting" and "The HAWK in the Rain"; prompt on "bird"; accept ACCIPITER, ACCIPITRIDAE, and ACCIPITRINAE from fiends]

[10] This former British poet laureate wrote those hawk poems, and broke his 35-year long silence about his relationship with Sylvia Plath in poems like "The Blue Flannel Suit."

ANSWER: (Edward James) Ted HUGHES

[10] In this earliest poem of his, Hughes analogizes the creative process to the entry into the mind of a "sudden sharp hot stink" of the title animal, which "now, and again now, and now, and now / Sets neat prints into the snow."

ANSWER: "The THOUGHT FOX"

4. This denomination puts out the publication *House to House Heart to Heart* and a TV channel called the Gospel Broadcasting Network. For 10 points each:

[10] Name this group of autonomous protestant Christian congregations known for opposing organized mission groups and instrumental accompaniment to singing, because neither are mentioned explicitly in the New Testament.

ANSWER: CHURCHES OF CHRIST

[10] Like Jehovah's Witnesses, Church of Christ congregations conduct this rite by immersion, whereby the whole body is submerged in water, as opposed to affusion or pouring and aspersion or sprinkling.

ANSWER: BAPTISM

[10] The Churches of Christ are linked to the Restoration movement that flourished in America around the time of the Second Great Awakening. That movement kicked off with the Cane Ridge Revival, which was named for a meeting house in this U.S. state.

ANSWER: KENTUCKY

5. This trumpeter published his memoirs under the title *To Be, or Not... to Bop*. For 10 points each:

[10] Name this composer of the standards “A Night in Tunisia” and “Salt Peanuts,” who was known for his bent-bell trumpet.

ANSWER: Dizzy GILLESPIE [or John Birks GILLESPIE]

[10] Gillespie was also a pioneer of Afro-Cuban jazz, collaborating on songs like “Manteca” with Chano Pozo, a player of this instrument. Experienced players can create a glissando popularly known as a “moose call.”

ANSWER: CONGA drums [prompt on “drums,” I guess]

[10] Gillespie’s band performed “Manteca” and “A Night in Tunisia” at the 1957 incarnation of this annual jazz festival, which in 1956 featured an acclaimed long performance of “Diminuendo and Crescendo in Blue” by the Duke Ellington Orchestra, and in 1955 saw Miles Davis’s famous performance of “Round Midnight.”

ANSWER: NEWPORT Jazz Festival

6. Answer the following about water in ancient Egypt, for 10 points each.

[10] Ancient Egyptians drew water from the Nile using this fulcrum-based simple machine. Peasants operated this machine by pulling down the long end to put a bucket in the water, then letting the counterweight on the short end lift the bucket.

ANSWER: a SHADUF [accept SADUF or SHADOOF, but absolutely do not accept “Shoopuf”]

[10] The first attested reference to Egyptian irrigation appears on the mace head belonging to the predynastic ruler known by this animal epithet, dating to about 3100 BCE. Possibly the same person as Narmer or Menes, he’s been given the name of a poisonous desert invertebrate later deified into the goddess Selket.

ANSWER: SCORPION King [accept Scorpion II or Selk or Waha]

[10] Two massive statues known by this name were built by Amenhotep III to stand guard over his mortuary temples at the Theban metropolis across the Nile from Luxor. Several projects have been designed around preventing the Nile from eating away at these statues.

ANSWER: COLOSSI OF MEMNON [or el-Colossat or es-Salamat]

7. One type of this device is manufactured to minimize the base recombination current and consists of two PN junctions, while another variant uses an electric field applied to the gate to control the flow of carriers between source and drain. For 10 points each:

[10] Identify this semiconductor device which comes in bipolar junction and field effect variants.

ANSWER: TRANSISTOR

[10] This is the name for a pair of bipolar junction transistors where the emitter of the first transistor feeds into the base of the second. It is often used to increase the current gain when a single transistor is not strong enough.

ANSWER: DARLINGTON configuration or pair

[10] This four-parameter model is used to calculate the emitter and collector currents of the BJT in terms of exponential factors relating the base-emitter and base-collector voltages to the thermal voltage.. Its parameters are the emitter and collector saturation currents and the forward and reverse common-base gain.

ANSWER: EBERS-MOLL model

8. This character is first introduced in the story “The King,” in which his men set fire to a police station to distract the cops from this character’s wedding to Eichbaum’s daughter. For 10 points each:

[10] Identify this son of Mendel, a gangster and resident of Moldovanka

ANSWER: Benya KRIK [accept either name]

[10] Benya Krik figures prominently in the *Odessa Stories* of this Soviet-Jewish author, whose other major collection is *Red Cavalry*.

ANSWER: Isaak Emmanuilovich BABEL

[10] Another of the *Odessa Stories* tells of Babel’s persecution at the hands of anti-Semites in school, and of his purchase of these creatures from Ivan Nikodemych just before finding out from Makarenko that his grandfather has been killed in a pogrom. Makarenko then crushes one of these title birds on the narrator’s face.

ANSWER: DOVE [the story is “The Story of My Dovecot”]

9. Obstacles to this proposed treaty include the question of who has the right to the name “feta cheese.” For 10 points each:

[10] Identify this proposed agreement which could create 2 million jobs, though it has been set back by allegations of NSA spying on world leaders.

ANSWER: the EU-US FREE TRADE AGREEMENT [or the TRANSATLANTIC Free Trade Agreement; or the TRANSATLANTIC TRADE AND INVESTMENT PARTNERSHIP; or TTIP]

[10] This first permanent president of the European Council supports the agreement. A former Belgian PM, he is also known for his passion for writing haiku.

ANSWER: Hermann van ROMPUY

[10] Partly driving Europe's desire for a free trade agreement is the state of unemployment in countries such as this home of the Golden Dawn party.

ANSWER: GREECE [or HELLAS]

10. One portrait shows this woman reclining on a couch fully clothed in a turquoise dress covered in pink roses as flowers are casually strewn on the floor in front of her. For 10 points each:

[10] Name this woman who is depicted as an intellectual in a notable portrait holding a book over a cluttered, open desk covered in quills.

ANSWER: Madame de POMPADOUR

[10] Madame de Pompadour was the patron of this French Rococo artist and commissioned his painting *The Toilet of Venus*.

ANSWER: Francois BOUCHER

[10] Another allegorical portrait of Madame de Pompadour was painted by this artist who depicted her "as Diana the Huntress" wearing a lion skin.

ANSWER: Jean-Marc NATTIER

11. This giant lost his daughters Gjalp and Greip after their attempt to squash Thor against the ceiling only got them crushed into the floor. For 10 points each:

[10] Name this giant who imprisoned Loki in a chest for months to get the trickster god to bring Thor unarmed into his house.

ANSWER: GEIRROD [or GEIRROTH]

[10] Loki obligingly got Thor to approach Geirrod without this all-powerful hammer or the strength-enhancing belt Thor used to carry it.

ANSWER: MJOLLNIR

[10] Luckily, Thor survived the scrape with Geirrod thanks to the advice of this god's mother Grid. This silent god will use his shoe to maul the Fenris Wolf at Ragnarok.

ANSWER: VIDARR

12. The E1 variety of these compounds is used to treat erectile dysfunction. For 10 points each:

[10] Name these twenty-carbon compounds whose synthesis is conducted by cyclooxygenase, or COX, enzymes. As a result, their activity is inhibited by NSAIDs, such as ibuprofen or aspirin.

ANSWER: PROSTAGLANDINS

[10] Prostaglandins are enzymatically derived from these long-tailed compounds, three of which are bound to glycerol in triglycerides. They can either be saturated or unsaturated.

ANSWER: FATTY ACIDS [grudgingly prompt on "fats"]

[10] This related class of fatty acid derivatives contains a distinct six-membered ether-containing ring, acts as a vasoconstrictor in homeostatic balance with prostacyclins, and aids platelet aggregation, explaining its name.

ANSWER: THROMBOXANES

13. An intellectual from this country declares, "We have given nothing to the world, we have learnt nothing from the world" in his first Philosophical Letter, written to the periodical *Teleskop*. For 10 points each:

[10] Name this country whose 19th-century westernizing *intelligentsia* included thinkers like Pyotr Chaadayev and Mikhail Bakunin.

ANSWER: RUSSIAN Empire

[10] This westernizing writer argued that Russia could reach socialism through "peasant populism" in *My Past and Thoughts*. This "father of Russian socialism" also authored *From the Other Shore* and launched the periodical *The Bell* to lobby for emancipation.

ANSWER: Aleksandr Ivanovich HERZEN

[10] In contrast, this autocratic education minister under Nicholas I wrote a famous letter asserting that Russia's universities

should inculcate the values of “Orthodoxy, Autocracy, and Nationality.”

ANSWER: Count Sergey UVAROV

14. This character allows Willie-Jay to give him an interpretation of his sister Barbara’s condescending letter, and he keeps a dictionary of obscure words he can never use, such as “thanatoid.” For 10 points each:

[10] Name this character who has a recurring dream about a yellow bird that saves him from being eaten by a snake. He quickly runs out of money after moving to Mexico City in hopes of finding sunken treasure in a section titled “Persons Unknown.”

ANSWER: Perry SMITH [or PERRY Smith]

[10] This author fictionalized Perry Smith’s murder of the Clutter family in his nonfiction novel *In Cold Blood*.

ANSWER: Truman CAPOTE

[10] In this first novel by Truman Capote, Randolph brings his cousin Joel Knox to Scully’s Landing to try and initiate the boy into a homosexual relationship.

ANSWER: OTHER VOICES, OTHER ROOMS

15. This book claims that seeing an indefinite number of white swans does not justify the conclusion that black swans do not exist in its first section, on the problem of induction. For 10 points each:

[10] Name this 1934 book arguing that instead of seeking to justify theories inductively, scientists should seek experiments to falsify their theories and thereby corroborate those that are not falsified.

ANSWER: The LOGIC OF SCIENTIFIC DISCOVERY [or LOGIK DER FORSCHUNG]

[10] *The Logic of Scientific Discovery* was authored by this teacher of George Soros, a philosopher of science who also wrote *The Open Society and Its Enemies*.

ANSWER: Karl POPPER

[10] The eighth chapter of *The Logic of Scientific Discovery* is dedicated to providing a foundation for a theory this concept, which Popper links in a later section of the same chapter to the idea of corroborating hypotheses.

ANSWER: PROBABILITY

16. Alfredo Casella made an orchestral arrangement of this piece, which includes a coda that the composer instructed performers to play in the manner of the Trepak. For 10 points each:

[10] Name this legendarily difficult solo piano piece inspired by a trip to the Caucasus.

ANSWER: ISLAMEY: An Oriental Fantasy, Op. 18

[10] This composer created his *Gaspard de la nuit* specifically to outdo the difficulty of Balakirev’s *Islamey*, but chilled out for an orchestral piece built upon an unchanging snare drum ostinato rhythm.

ANSWER: (Joseph)-Maurice RAVEL

[10] Balakirev recommended this late Romantic composer for the post of director of the Imperial Choir at St. Petersburg. This teacher of Rachmaninoff is best known for his first piano trio and for his *Variations on a Theme of Tchaikovsky*.

ANSWER: Anton (Stepanovich) ARENSKY

17. Models of this type consist of interactions between supply, demand, and monetary policy, formalized as interactions between representative agents in clearing markets, with agent actions driven by expectations about future monetary policy. For 10 points each:

[10] Identify this popular class of economic models in which agents are taken to perform intertemporal optimization subject to budget constraints, while reacting to random supply, demand, and monetary shocks.

ANSWER: dynamic stochastic general equilibrium models

[10] One early application of DSGE formalisms was in Kydland and Prescott’s 1982 paper, “Time to Build and Aggregate Fluctuations,” which presented a “real” theory of these phenomena, the secular fluctuations of macroeconomic indicators such as GDP and employment.

ANSWER: BUSINESS CYCLES

[10] This institution relies on the Smets-Wouters DSGE model in order to forecast quarterly macroeconomic phenomena.

ANSWER: European Central Bank

18. When guided in layers, these phenomena can be considered as Lamb waves. For 10 points each:

[10] Name this type of seismic surface wave which causes ground particles to move in elliptical patterns with the major axes perpendicular to the direction of propagation.

ANSWER: RAYLEIGH waves

[10] Rayleigh waves arise from a coupling between p-waves and s-waves which have this property in the vertical direction.

ANSWER: POLARIZATION [accept anything that mentions that the wave is POLARIZED]

[10] P-waves are compressive and described by this term, which means that the compression of the material is along the direction of motion; waves in which material moves orthogonally to the direction of motion are called transverse.

ANSWER: LONGITUDINAL wave

19. The speaker describes tending the title flower in both July and January and describes a man “who tears out of me the heart with which I live.” For 10 points each:

[10] Name this eight-line poem in which the “cruel man” and the “sincere friend” are both offered the title flower.

ANSWER: “CULTIVO UNA ROSA BLANCA” [or “I GROW A WHITE ROSE”; or “I CULTIVATE A WHITE ROSE”]

[10] “Cultivo una rosa blanca” appears in this poet’s 1891 collection *Versos Sencillos*, which provided the texts that Julian Orbon adapted into the lyrics of the patriotic song “Guantanamera.”

ANSWER: José MARTÍ

[10] Martí called for “continental unity” in order to cultivate “our own Greece” from the history of “the Incas to the present tradition” in this essay, which warns against the Northern “tiger” and begins, “The conceited villager believes the entire world to be his village.”

ANSWER: “OUR AMERICA” [or “NUESTRA AMERICA”]

20. This country’s colonial possessions in Africa included Cape Verde and Angola. For 10 points each:

[10] Name this country which split the New World with Spain in the Treaty of Tordesillas.

ANSWER: PORTUGAL

[10] The Portuguese also set up a trading post on this artificial island off of Nagasaki. It was later held by the Dutch as the exclusive Western trading port in Japan.

ANSWER: DEJIMA island

[10] At the Conference of Berlin, Portugal’s claims in Africa were represented by this map which showed Portuguese control stretching from the Atlantic to the Indian Ocean. In 1890, the UK made this map obsolete by demanding the land in between modern day Mozambique and Angola.

ANSWER: PINK map [or ROSE-COLORED map]

EXTRA BONUS

21. This character helps Henry Wharton escape from jail dressed as the servant Caesar Thompson and while in jail he swallows a paper that would exonerate himself from treason charges to avoid revealing his secret employer. For 10 points each:

[10] Name this mysterious peddler, the title character of a novel subtitled “A Tale of the Neutral Ground”, whose corpse is discovered with a letter from General Washington revealing his true identity as an American agent.

ANSWER: HARVEY BIRCH [accept either]

[10] In this James Fenimore Cooper novel, Natty Bumppo is called La Longue Carabine and has adventures around Lake Ontario, which is referred to as “the Inland Sea” in its subtitle.

ANSWER: The PATHFINDER, or The Inland Sea

[10] Chingachgook becomes the title character in *The Last of the Mohicans* after Magua kills this man, who is Chingachgook’s son.

ANSWER: UNCAS