

VCU Closed

February 2, 2013

Packet by Harvard A (Stephen Liu, Graham Moyer, David Liu, Sriram Pendyala) and UVa B (Daniel Hothem, Sarah Angelo, Dennis Loo, FutureJR Roach)

1. One character in this play remarks that the main characters are all “eaters of the earth,” and that character later comforts another character who ends the play by asking “are you afraid, Mama?” Another character in this play slaps his wife for suggesting that their niece will not have to marry their son. A confession that a wife is glad of her husband’s impending (\*) death causes that husband to have a heart attack. Two brothers decide to try to blame their crime of illegally borrowing \$88,000 one of their sons, Leo, in this play. Chicago businessman William Marshall flirts with the wife of Horace in this play, in which Oscar and Ben are thwarted by their sister. For 10 points, name this play in which Regina Giddens outmaneuvers her family, by Lillian Hellman.

ANSWER: *The Little Foxes*

2. In one aspect, this goddess took the form of a black winged horse and was given the epithet **Aganippe**. An oak tree sacred to this deity was cut down by Erisychthon, whom she punished with unrelenting hunger that resulted in his selling Mestra into slavery. This goddess gave birth to the immortal horse Arion after being raped by her brother in the form of a horse. Her attempt to make Demophon immortal was interrupted by his mother Metanira, so she took his brother Triptolemus under her wing, leading to the celebration of the (\*) Eleusinian Mysteries. The seasons came to a halt while this goddess searched for her daughter, who had swallowed a pomegranate seed in the underworld after being abducted by Hades. For 10 points, name this mother of Persephone and Greek goddess of agriculture.

ANSWER: Demeter

3. In an amusing episode of this conflict, Charlotte de Tremouille and her household servants held her manor against the troops of Colonel Alexander Rigby for an entire year. In addition to the Siege of Lathom House, this conflict saw the Trained Bands militia skirmish alongside forces under the Earl of Essex at the Battle of (\*) Turnham Green. One side in this conflict received Scottish reinforcements under Alexander Leslie after signing the Solemn League and Covenant, and won key victories under Sir Thomas Fairfax, who was later removed by the Self-Denying Ordinance. Prince Rupert of the Rhine led one side of this war in two crushing defeats at Marston Moor and Naseby, leading to victory for the New Model Army. For 10 points, name this conflict that saw Charles I fight Parliament for control of his kingdom and saw the rise of Oliver Cromwell.

ANSWER: First English Civil War

4. The right side of this work shows a top hat upside down a table, on which sits a man in brown reading a book, and in front of him a boy lays on the ground sketching on paper beside a woman with a flowery shawl. The artist described that group of people as the “shareholders,” while the other side of this work depicts the “other world of trivial life.” That side of this work includes a feathered hat, guitar, and dagger representing (\*) academic painting, while a woman in rags suckles her child while seated underneath a skull. The artist depicted his friends Champfleury and Baudelaire in this painting, the center of which features a cat sprawled on the ground and a boy looking up at a canvas of a landscape. A nude model also gazes at the canvas while standing behind the title figure, who holds a palette and a paintbrush. For 10 points, name this work by Gustave Courbet depicting the place where he worked.

ANSWER: *The **Artist's Studio**: A Real Allegory of a Seven Year Phase in My Artistic and Moral Life* [Accept *L'Atelier du peintre* or *The Painter's Studio*.]

5. In solid-state physics, this constant is sometimes written as one-quarter the product of the impedance of free space and the conductance quantum. The first order special-relativistic perturbation to the  $1s$  electron energy in the hydrogen atom is proportional to the square of this constant, and the second order perturbation is proportional to its fourth power. This constant can be written as the ratio of the (\*) Bohr atom's electron velocity to the speed of light. It is the square of the ratio of the electron charge to the Planck charge, and hence is the fundamental coupling constant characterizing the strength of the electromagnetic interaction. For 10 points, name this physical constant, which is often denoted with the Greek letter alpha, and whose reciprocal is close to 137.

ANSWER: fine structure constant

6. The Rettig report investigated political deaths during this man's regime, which was initially opposed by Gustavo Leigh. One song sung by this man's opponents was the anthem "We Will Win" which was sung by one of the victims of a massacre in a soccer stadium during his regime. This man's predecessor vowed to remain in La Moneda palace during this man's (\*) coup. *El ladrillo* or “the brick” served as the manifesto of this man's economic policy, which was devised by the Chicago Boys. Michael Contreras led the DINA, a secret police force under this man, which helped carry out Operation Condor. For 10 points, name this Chilean dictator who ousted Salvador Allende.

ANSWER: Augusto Pinochet

7. Just north of this mountain's Great Gorge lies the Don Sheldon Amphitheatre, which is located at the top of the Ruth Glacier and near the Broken Tooth. Perhaps because helicopter rescues are viable, an unusually large percentage of South Korean climbers have had to be rescued from Cassin Ridge and its West (\*) Buttress Route. The nearby landmarks of Browne Tower, Mount Silverthrone, Mount Huntington, and Mount Foraker can be seen in airplane tours based out the nearby town of Talkeetna. The first man to summit it was Walter Harper, in an expedition led by Harry Karstens and Hudson Stuck. Its alternate name means “The High One” in Athabascan. For 10 points, name this centerpiece of Denali National Park, the highest mountain in North America.

ANSWER: Mount McKinley [or Denali before it is read]

8. The Kaiser-Squires inversion is used in observations of this phenomenon to reconstruct mass distributions. The OGLE and MOA projects use this phenomenon, and in particular detect this phenomenon within Baade's window of the Zone of Avoidance. The galaxy cluster Abell 370 is known for the arcs caused by it. The "Old Faithful" QSO 0967+561 double (\*) quasar was the first object found to be imaged twice due to this phenomenon. The micro- version of this phenomenon is used to detect extrasolar planets, and it is responsible for Einstein rings. For 10 points, name this phenomenon in which light is bent due to the curved spacetime around a massive object.

ANSWER: gravitational lensing

9. This character tells a story about a five-year-old girl who is locked in an outhouse by her family before telling another story about the murderer Richard's final meal and execution in Geneva. This character hears a story about a girl who watched a child being crucified while eating pineapple jam. This character visits a man who had told him that "it's always worthwhile speaking to a clever man." This man throws thirty thousand (\*) rubles into the air before having a mental breakdown, prompting Katerina Ivanovna to betray his brother. This character wrote an essay advocating theocracy in Russia, and told his brother the story of the Grand Inquisitor. For 10 points, name this middle child of a novel by Fyodor Dostoevsky, the brother of Dmitri and Alyosha.

ANSWER: Ivan Karamazov [prompt on Karamazov]

10. This artist's name was used in sculpture designed in response to criticisms by William Tucker and Anthony Caro: that Bruce Nauman sculpture suggests hands tied behind a back and is named This artist *Bound to Fail*. One of this artists' works, which stands in a pool outside of the House of Cultures of the World in Berlin, is entitled *Large Divided Oval: Butterfly*, and another sculpture by him is an abstract (\*) form that rises up in the hollowed out interior of another, entitled *Large Upright Internal/External Form*. This artist created a series of six casts of his *Draped Seated Woman*, and was heavily influenced by a Mayan sculptural form known as the Chac Mool. For 10 points, name this British sculptor of a series of *Reclining Figures*.

ANSWER: Henry Moore

11. This film character is instructed to use the name Miss Stephanie Broadchest by a man claiming the name of Arlington Beech. When another character sees this woman tied up and lying on a highway, he flips his Aston Martin to avoid hitting her. She was given a necklace with an Algerian love knot by her former lover, who she believes is being held hostage by (\*) Quantum, and she later hands over to Mr. White money owed by Le Chiffre in order to save her lover's life. Eventually, this character locks herself in the elevator of a flooded building in Venice and drowns. For 10 points, name this character played by Eva Green in *Casino Royale*, whose name is a pun on "West Berlin."

ANSWER: Vesper Lynd [or Vesper Lynd]

12. These organisms were used to develop a model for frameshift mutations named after Streisinger. One example of these organisms has Qut and Nut sites, which bind to Q and N proteins during antitermination. An experiment that showed that these organisms do not induce mutations that are harmful to their niche was used to show that mutations do not occur in response to selection. That experiment was run by Luria and Delbruck. Radioactive phosphorous and (\*) sulfur were used to tag the DNA and protein shells of these viruses respectively in another experiment. That experiment showed that DNA transmits genetic information and was run by Hershey and Chase. These viruses come in lambda and T4 variants. For 10 points, name these viruses that target bacteria.

ANSWER: bacteriophage

13. Gerald and Tracy Parks were among the survivors following an event involving this organization that took place at Port Kaituma. Tim Carter was entrusted by it to transfer its funds to the Soviet government. Deborah Layton wrote *Seductive Prison* as an account of her time in this organization that originated in Indianapolis. Timothy Stoen initially played an important role in this organization that was investigated by Congressman (\*) Leo Ryan, resulting in Ryan's murder. Following that murder, members performed a "revolutionary suicide" in its community in Guyana by drinking a cyanide-laced Kool-aid drink. For 10 points, name this organization responsible for the deaths of 918 people in a mass suicide.

ANSWER: The Peoples' Temple [or Jonestown]

14. This composer's *Souvenir de Chopin* was one of three works taken from the film *A friend will come tonight*, and he described one of his symphonies as a drama depicting "misery, happiness, and man." This man composed a work for solo flute that gives the image of a dancing goat, *Dance de la chevre*, in addition to a "dramatic (\*) oratorio" set to a libretto by Paul Claudel and commissioned by Ida Rubenstein. "Dies Irae," "De profundis clamavi," and "Dona nobis pacem" name the three movements of his third symphony. This composer of *Joan of Arc at the Stake* and the *Symphonie Liturgique* may be more well known for his "dramatic psalm" *King David* and for a work that depicts a steam locomotive. For 10 points, name this French composer of *Pacific 231*, a member of Les Six.

ANSWER: Arthur Honegger

15. One of this author's chapters opens with the quote "As long as you can smile, success can be yours," which comes from a radio commercial for toothpaste. One character created by this man, while doped up on morphine, imagines that a native girl is his ex-lover (\*) Marta. A work by this man, who wrote footnotes about homosexuality, is titled for the humiliation endured by Tyrone Power in "Blood and Sand." This author of *Heartbreak Tango* wrote about a burgeoning relationship between the two cellmates Valentin and Molina. For 10 points, name this Argentinian author of *Betrayed by Rita Hayworth* and *The Kiss of the Spiderwoman*.

ANSWER: Manuel Puig

16. This man questioned who can define what is meat and what is plant after having his cook grill him a deer during a solar eclipse. As a child, this man impressed his teachers by explaining the symbolism of the first letter of the alphabet, but later caused a stir when he refused to accept a traditional symbolic string. This man once hid a dish of food under a (\*) sheet and made it look like a corpse, then asked his sons to eat it; when they both refused, he blessed the man who did with the ang and declared him to be part of his body. When this man died, his corpse turned into flowers, and he was succeeded by Angad. For 10 points, name this man who said "there is no Hindu, there is no Muslim," the first guru of Sikhism.

ANSWER: Guru Nanak

17. During one of this man's lectures, CB van Niel jumped out of his seat and started crying in happiness. This man introduced the use of Duolite A-3 anion exchange resin to his field, and he also developed the TTA solvent extraction process to purify plutonium. This man used a "lollipop" flask to grow *Chlorella* cells, which he periodically killed using alcohol in order to find the compounds that fixed a (\*) tracer. This man's most famous discovery used two-dimensional paper chromatography and radioactive carbon-14 to label the products of carbon fixation. For 10 points, name this UC Berkeley scientist, who with James Bassham and Andrew Benson discovered a namesake biochemical cycle in plants.

ANSWER: Melvin Ellis Calvin

18. According to the Muratorian Canon, the first pope with this name was the brother of the freedman Hermas, who authored *The Shepherd*. Another man with this name issued the Papal Bull *Quo Primum* to institute his revision of the Roman Missal and instituted the feast day of Our Lady of Victory. That Pope, the fifth of this name, also declared Elizabeth I a heretic and formed the (\*) Holy League to fight the Turks at Lepanto. A third man with this name declared Papal infallibility at the First Vatican Council. The assumption of Mary was made dogma by another Pope of this name in his *Munificentissimus Deus*, while his predecessor secured sovereignty for the Vatican in the Lateran Treaty, signed with Mussolini's government. For 10 points, give this papal name held by twelve men, the ninth of which was the longest reigning pope in history.

ANSWER: Pius

19. This poet described "clear-ranged unnumbered heads, bowed with their aureoles" in a poem about a person whose hair is "yellow like ripe corn." He also wrote a poem about a "poor shameful [prostitute], full of grace" who he identifies as "lazy laughing languid (\*) Jenny." This man, who exhumed a batch of manuscripts from his wife's grave, also wrote a poem whose first four stanzas are inscribed on the frame of his painting of its subject, a woman dead ten years who has been praying for her lover to join her in heaven. For 10 points, name this Pre-Raphaelite poet and painter, the author of "The Blessed Damozel" and brother of fellow poet Christina.

ANSWER: Dante Gabriel Rossetti

20. For two-good Cobb-Douglas utility functions with decreasing returns to scale, this function is linearly proportional to utility. Shephard's Lemma gives this microeconomic function for a good as the partial derivative of the expenditure function with respect to the price of the good. A key equation of consumer theory gives the result that the change in this function for a good with respect to its price is dictated by only (\*) substitution effects, not income effects; for this reason, this function is generally referred to as the compensated form of its variety, and hence can only have a negative slope. That equation dealing with this quantity is the Slutsky equation. This function for a good can be calculated by solving the dual optimization problem to utility maximization which involves minimizing cost under a utility constraint. For 10 points, name this type of demand function, which is contrasted with the Marshallian demand function.

ANSWER: Hicksian demand [prompt on demand before it is read]

TIEBREAKER/EXTRA

**21. One work by this man depicting puti carrying away the cross was given to a French cardinal rather than its commissioner, whose ornate dress is emphasized more strongly in her own portrait than is her son Giovanni. Besides a deposition of Christ painted for the duchess (\*) Eleanor of Toledo, this artist also painted a mostly-nude admiral holding a trident pointing up towards his name in his allegorical portrait of *Andrea Doria as Neptune*. The oldest title character of another work by this artist looms over a woman holding a golden apple and kissing her winged son. For 10 points, name this artist of *Venus, Cupid, Folly, and Time*.**

ANSWER: Agnolo **Bronzino**

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1. According to this man, conformity, innovation, ritualism, retreatism, and rebellion are the five modes of adaptation. For 10 points each:

[10] Name this man whose "middle range theory" uses empirical phenomena to generate verifiable general sociological statements and differs from narrow empiricism.

ANSWER: Robert K. **Merton** [do not accept "Robert C. Merton"]

[10] Merton used this term to describe the "unintended and unrecognized consequences" of something. He contrasted these with "manifest functions."

ANSWER: **latent** functions

[10] Merton also coined this term for an adult figure that children may pattern behavior after.

ANSWER: "**role model**"

2. For 10 points each, name these books by Ernest Hemingway.

[10] This nonfiction book about bullfighting chronicles the rivalry during 1959 of the bullfighters Luis Miguel Dominguin and Antoni Ordenez. This was the last thing Hemingway wrote.

ANSWER: *The **Dangerous Summer***

[10] This novel is set during the Spanish Civil War. It chronicles American Robert Jordan's attempts to destroy a bridge despite the betrayal of guerillas such as Pablo.

ANSWER: ***For Whom the Bell Tolls***

[10] This book, ostensibly non-fiction, is a memoir of Hemingway's time in Paris in the 1920s. It includes scathing portraits of contemporaries and luminaries such as F. Scott Fitzgerald, as well as a multi-chapter to detour to Austria where Hemingway and his wife go skiing at Schruns.

ANSWER: A ***Moveable Feast***

3. Name these Southeast Asian states, for 10 points each.

[10] This kingdom was founded by U Thong, and came to dominate much of Southeast Asia from the fourteenth to eighteenth centuries. Its last king, Ekathat, was defeated by the Burmese in the 1760s.

ANSWER: **Ayutthaya** Kingdom

[10] This Buddhist trading empire based in the Malay Peninsula dominated trade in the region throughout the Middle Ages. It declined slowly through pirate raids, wars with Indian kings, and the growth of other Malay powers, rivaling its longtime capital at Palembang.

ANSWER: **Srivijaya** Empire

[10] This modern-day kingdom was founded by Rama the Great of the Chakri Dynasty in the mid-eighteenth century.

ANSWER: Kingdom of **Thailand** [or Prathet **Thai**]

4. Peter Agre won the 2003 Nobel Prize in Chemistry for discovering these proteins. For 10 points each:  
[10] Name these proteins that regulate the flow of water into a cell. The NPA motif is thought to help rotate water molecules within these protein.

ANSWER: **aquaporins**

[10] Aquaporin regulates the flow of water across this barrier that separates the interior of a cell from its outside environment. This lipid bilayer is described by the fluid mosaic model.

ANSWER: **cell membrane** [or **plasma membrane**]

[10] This filter is typically found above the NPA motif in aquaporin. This amino acid cluster allows lets aquaporin selectively bind to water.

ANSWER: **ar/R** selectivity filter [or **aromatic/arginine** selectivity filter]

5. This man's *Blue and Brown Books* were used as preliminary studies for a work that argues on the incoherence of private languages. For 10 points each:

[10] Name this philosopher who claimed that "the world is all that is the case."

ANSWER: Ludwig **Wittgenstein**

[10] Members of this group, which included Moritz Schlick, believed in logical positivism. They loved Wittgenstein's *Tractatus Logico-Philosophicus*.

ANSWER: **Vienna Circle**

[10] This member of the Vienna Circle claimed that given an infinite series of parameters  $A(1)$  though  $A(n+1)$  you can infer the conclusion  $(x)A(x)$ , which is known as the omega rule, in his *Logical Syntax of Language*.

ANSWER: Rudolf **Carnap**

6. In this play, Pylades convinces the protagonist to complete his revenge. For 10 points each:

[10] Name this play about the reunion and revenge plot of Electra and her brother, the second entry in Aeschylus's *Oresteia*.

ANSWER: *The **Libation Bearers*** [or **Choiphoroj**]

[10] One exception to Greek tragedy's reluctance to deal with recent events is this earlier play by Aeschylus, in which Atossa predicts the failure of the title imperial group at the Battle of Salamis.

ANSWER: *The **Persians***

[10] Danae and Perseus are retrieved by some anglers on an island ruled by Silenus in this fragmentary satyr play, the most extant in the genre by Aeschylus.

ANSWER: *The **Net Fishers*** [or **Dictyulci**]

7. This piece is based on a hymn in the Phrygian mode. For 10 points each:

[10] Name this work that divides the string orchestra into three sections. Its basis was part of a hymnal by Matthew Parker and contains the line "Why fum'th in fight."

ANSWER: **Fantasia on a Theme by Thomas Tallis** [or **Tallis Fantasia**]

[10] *Fantasia on a Theme by Thomas Tallis* was by this English composer. Geoffrey Toye was the first to conduct his *London Symphony*.

ANSWER: Ralph **Vaughan Williams**

[10] Vaughan Williams wrote this type of piece entitled for Norfolk after being inspired by William Stanford's "Irish" one.

ANSWER: **rhapsody**



8. A speech that cautions against this concept notes that “the solitary inventor, tinkering in his shop,” has been overshadowed by large corporations. For 10 points each:

[10] Give this phrase that was used in a speech warning that “the acquisition of unwarranted influence” by this group must be guarded against “in the councils of government.”

ANSWER: the **military-industrial** complex

[10] This President and World War II general delivered the aforementioned farewell address. Spurred by the launch of Sputnik, this man authorized additional federal funding for education by signing the National Defense Education Act.

ANSWER: Dwight D. **Eisenhower**

[10] After Stalin’s death, Eisenhower delivered this speech, which claims that the world “divided to follow two distinct roads.” Before listing items that cost the same as a bomber, this speech states that “the worst is atomic war.”

ANSWER: “The **Chance for Peace**” speech [or “**Cross of Iron**” speech]

9. These forces always point towards an origin, and their magnitude depends only on the distance between the point and the origin. For 10 points each:

[10] Name this type of force, inverse-square versions of which include gravitational and electrostatic forces.

ANSWER: **central** forces

[10] An important set of laws governing central forces are the three laws of planetary motion named for this physicist. The second one says that an orbiting body sweeps out equal areas in equal time.

ANSWER: Johannes **Kepler**

[10] This theorem states that the only potentials that can produce stable orbits via central forces are inverse-square forces or radial harmonic oscillator potentials.

ANSWER: **Bertrand**’s theorem

10. She drives a taxi owned by her grandmother, served as a surrogate mother for her brother Frank’s triplets, has a twin sister named Ursula, and plays original songs like “Smelly Cat” at the Central Perk coffeehouse. For 10 points each:

[10] Name this eccentric 1990s TV character who works as an unlicensed massage therapist and eventually marries Mike Hannigan.

ANSWER: **Phoebe** Buffay

[10] Phoebe is one of the six buddies on this sitcom that ran from 1994 to 2004. Its cast also included David Schwimmer and Jennifer Aniston, whose character Rachel had an extremely popular namesake hairstyle.

ANSWER: **Friends**

[10] Lisa Kudrow currently appears on and writes for this mostly improvised sitcom. She plays Fiona Wallace, a self-appointed psychiatrist who conducts 3-minute sessions with her patients via Skype.

ANSWER: **Web Therapy**

11. Shots of Brueghel's *Hunters in the Snow* are interspersed between those of a woman in a yellow and brown dress with laces on the back and a man in a suit levitating within a library in this film. For 10 points each:

[10] Name this film based in which Kris Kelvin's dead lover Hari reappears to him on a space station due to the magical powers of the ocean on the planet that Kris is orbiting.

ANSWER: **Solaris**

[10] *Solaris* is sometimes seen as Andrei Tarkovsky's response to this Stanley Kubrick film. This film contains one scene in which a black monolith appears in a white bedroom that is decorated with French classical furniture.

ANSWER: **2001: A Space Odyssey**

[10] Another purveyor of intellectual science fiction in the 1960s was this man, who wrote the screenplays for *Requiem for a Heavyweight*, *Seven Days in May*, and *Planet of the Apes*.

ANSWER: Rod **Serling**

12. The narrator of this novel sees the first candidate for the title object in a museum at the Hotel-Dieu, and the second at a converted house-museum in Croisset. For 10 points each:

[10] Name this novel in which Geoffrey Braithwaite tries to identify the original of a stuffed animal named Loulou. This essentially plotless novel includes long digressions about Geoffrey's deceased wife.

ANSWER: **Flaubert's Parrot**

[10] *Flaubert's Parrot* was written by this English author of *The Sense of an Ending* and *England, England*.

ANSWER: Julian Patrick **Barnes**

[10] Under the pseudonym Dan Kavanagh, Barnes wrote four novels about Duffy, who has this job. Other literary examples of them include Mike Hammer, Miss Marple, and Philip Marlowe.

ANSWER: private **detectives** [or **private investigators** or **gumshoes** or whatever, but don't accept "policemen" or anything like that]

13. Splittings in this type of spectroscopy have much higher energies than those in NMR. For 10 points each:

[10] Name this type of spectroscopy that typically uses microwave radiation to excite the spin of unpaired electrons that are placed in a magnetic field.

ANSWER: **EPR** spectroscopy [or **Electron Paramagnetic Resonance** spectroscopy; or **E**lectron **S**pin **R**esonance spectroscopy; or **E**lectron **M**agnetic **R**esonance spectroscopy]

[10] EPR spectroscopy is used to study these molecules that are formed by homolytic cleavages. Fremy's salt is an example of these highly reactive molecules that have unpaired electrons.

ANSWER: free **radical**

[10] This quantity is equal to the standard enthalpy change caused by a bond being cleaved by homolysis at zero degrees kelvin.

ANSWER: **bond-dissociation energy**

14. Identify these people whose seats were contested in the 2012 elections, for 10 points each.

[10] This former Representative from Texas, nicknamed "Dr. No," retired from the House to run for president in 2012, but failed to win the Republican nomination.

ANSWER: Ron **Paul**

[10] This Maine Republican, one of the "Gang of 14," announced in February 2012 that she would retire at the end of her term because she was sick of partisanship. Her Senate seat was won by independent Angus King.

ANSWER: Olympia **Snowe**

[10] This Representative defeated hotelier Jim Graves by just over four thousand votes in her closest election campaign to date.

ANSWER: Michelle **Bachmann**

15. For 10 points each, name some important Conservative Party British politicians of the 70s and 80s.

[10] This Prime Minister gained office after defeating Jim Callaghan in 1979. In 1990, her attempt to introduce a poll tax in the form of the Community Charge led to her replacement as Prime Minister by John Major.

ANSWER: Margaret **Thatcher**

[10] This minister, nicknamed "Tarzan," served most prominently as Margaret Thatcher's Secretary of Defense. His leadership challenge to Thatcher in 1990, although unsuccessful, proved the start of her fall, and in 2013 he criticized David Cameron's plan for a referendum on EU membership.

ANSWER: Michael **Heseltine**

[10] This Ulster Unionist MP during Thatcher's government left the Conservatives after they led Britain into the European Economic Community. He is best known for his "Rivers of Blood" speech against Harold Wilson's Race Relations Act.

ANSWER: Enoch **Powell**

16. The Cook-Levin theorem showed that the Boolean Satisfiability Problem is in this complexity class. For 10 points each:

[10] This class of problems consists of the problems that are the most difficult problems in NP; formally, a problem is in this class if and only if it is in NP and every problem in NP is reducible to it.

ANSWER: **NP-complete**

[10] The best known algorithms for NP-complete problems like k-SAT take at least this worst-case runtime, which implies that P is not equal to NP. A version of the halting problem which asks whether a Turing machine will stop in a finite amount of steps is also solvable in this runtime.

ANSWER: **exponential** [accept **2 to the n** or **{any number} to the n**; accept **2 to the polynomial** or **{any number} to the polynomial**, but do NOT just accept "polynomial"]

[10] This problem, which asks for the optimum way to place objects of certain value and weight into a container to maximize the value for a given maximum weight.

ANSWER: **knapsack** problem or **rucksack** problem

17. Works by this man that have sold for vast amounts of money include *Rebus* and *Bantam*. For 10 points each:

[10] Name this modern painter and sculptor known for creating his Combines by such means as standing a taxidermy goat on a painted canvas.

ANSWER: Robert **Rauschenberg**

[10] When Rauschenberg sought to make art through erasure rather than creation, he asked this man for a drawing. This abstract painter is known for his *Woman* series.

ANSWER: Willem **de Kooning**

[10] This wife of Willem de Kooning was also an abstract expressionist, though she used a more impressionistic style to paint a recognizable portrait of the president in her *John F. Kennedy*

ANSWER: **Elaine** de Kooning [or Elaine **Fried**]

18. This victory for the Sixth Coalition followed Marshal Oudinot's failure to capture Berlin, setting up this culmination of the Trachenberg Plan. For 10 points each:

[10] Name this battle, in which Charles XIV John, Alexander I, and the Count von Blucher defeated Napoleon.

ANSWER: Battle of **Leipzig** [or **Battle of the Nations**]

[10] The Battle of Leipzig led to the collapse of this group of French client states. It had been created through the Treaty of Pressburg and came to include the Kingdoms of Bavaria and Saxony.

ANSWER: **Confederation of the Rhine**

[10] This victory for Napoleon was key in establishing the Confederation of the Rhine. It led to the dissolution of the Holy Roman Empire and saw the recapture of the Pratzen Heights after the French had abandoned it to fake weakness.

ANSWER: Battle of **Austerlitz**

19. After this god had an affair with Ahalya, he was cursed by her husband Gautama Maharishi to have a thousand vulvae appear on his body. For 10 points each:

[10] Name this Hindu god of war and thunder who killed the water-stealing serpent Vritra after passing through his ninety-nine fortresses. He is described as chief of the gods in the *Rig Veda*.

ANSWER: **Indra**

[10] Indra loved drinking this hallucinogenic substance, even doing so to prepare himself for his battle against Vritra. The god of this substance is often identified with the moon god Chandra.

ANSWER: **Soma**

[10] Indra used this weapon to kill Vritra. Made by the Vedic creator god Tvastar, this weapon fired lightning at its enemies.

ANSWER: **Vajra**

20. This author was a close friend and biographer of Alberto Giacometti, and he wrote a play in which numerous powerful figures come to visit Irma, *The Balcony*. For 10 points each:

[10] Name this author, who wrote a novel in which the imprisoned drag queen divine is canonized, which Jean-Paul Sartre referred to as an “epic of masturbation,” entitled *Our Lady of the Flowers*.

ANSWER: Jean **Genet**

[10] Possibly Genet’s most famous work is this play, in which Claire and Solange work themselves into a frenzy and kill their mistress.

ANSWER: *The **Maid**s*

[10] In Genet’s *The Maid*s, Claire and Solange argue over their mutual lover Mario, a man of this profession. It’s also Macon Dead’s nickname in Toni Morrison’s *Song of Solomon*.

ANSWER: a **milkman**

21. Identify the following battles from various wars of independence. For 10 points each:

[10] The victory of Mexican forces in this battle against Napoleon III’s invading french forces is celebrated during the holiday Cinco de Mayo.

ANSWER: Battle of **Puebla**

[10] This 1819 victory for forces under Simon Bolivar consisting of Colombians, Venezuelans, and the British Legions resulted in the creation of the state of Gran Colombia.

ANSWER: Battle of **Boyaca**

[10] The army of Antonio Jose de Sucre, again with the help of the British Legion, defeated Marshal Aymerich’s forces at this battle that took place 3500 feet above sea level and resulted in the liberation of Quito.

ANSWER: Battle of **Pichincha**