**Chicago Open 2016: "An Insatiable Kingpin of International Meme-Laundering"**

**Packet by "Angelica, tell my wife Evan Adams doesn't have a real job anyway" (Evan Adams, Naveed Chowdhury, Chris Manners, and Cody Voight)**

**Edited by John Lawrence, Mike Cheyne, Matt Jackson, Adam Silverman, Mike Bentley, Aaron Rosenberg, Jake Sundberg, and Shan Kothari, with contributions from Ewan Macaulay and Jonathan Magin**

**Tossups**

1. *Description acceptable.* **During this scene, as a man shouts “help!” while grabbing another man by the ankle, the shot cuts to a small circular image centered on the screen, depicting another man’s vision through his binoculars. An exchange in this scene consists just of the surprised exclamation “You?!” and the venomous response “YOU” from a man who dies in some shallows, clutching a knife. During this scene, a man apologetically says “I had to do it. I had to do it. [...] It was the only thing to do” to two** (\*) Siamese porter-ladies. This scene cuts from a shot of a mortar being fired to a colonel intoning “What have I done?” At this scene’s conclusion, Malcolm Arnold’s orchestral counter-march to the “Colonel Bogey March” plays after the horrified Major Clipton exclaims “Madness! Madness!” For 10 points, identify this scene from a 1957 David Lean film, during which the title structure of the film is destroyed.

ANSWER: the **final** scene in *The* ***Bridge on the River Kwai*** [accept obvious equivalents for “final scene,” such as **ending** or the scene where the **bridge on the River Kwai is destroyed** until “is destroyed” is read]

2. **A center of learning in this city developed the doctrine of *Torah Umadda*. A "book of devout thoughts for everyday use," *Sun and Shield*, was printed by rabbiGustav Gottheil in this city. It's not St. Petersburg, but Lazare Saminsky composed lots of Jewish liturgical music while employed in this city. Doctrines codified in this city are the basis for the prayer book *Kol Haneshamah*. Rabbi Leo Jung played a major role in developing Modern** (\*) Orthodoxy at its Jewish Center. A rabbi resident in this city, Zalman Teitelbaum, claims to lead the Satmar dynasty in lieu of his brother who controls the nearby community Kiryas Joel. Menachem Mendel Schneerson, the last Lubavitcher rebbe, died in this city where Mordecai Kaplan founded Reconstructionist Judaism. For 10 points, name this home city of Yeshiva University, where tensions between blacks and Jews erupted in the Crown Heights riots.

ANSWER: **New York** City, New York

3. **During a twentieth century instance of these events, Carl Szokoll sabotaged his own side's forces in order to limit destruction; that instance occurred after Operation Spring Awakening's failure. After a successful instance of these events in the 1400's, residents mocked a defeated ruler by parodying his motto "A.E.I.O.U" to mean an empire "has lost everything." During another one of these events, Nicholas, Count of Salm, was wounded by a falling rock but successfully rallied numerous musketeers and landsknechts. For about four months in 1485, one of these events was conducted by the** (\*) Black Army when fighting Frederick III. One of these events came to an end after 18,000 men, including 3,000 winged hussars, staged one of the largest cavalry charges in history. For 10 points, Matthias Corvinus successfully carried out what event, which the Ottomans had less success doing in 1529 and, thanks to John III Sobieski, in 1683?

ANSWER: **sieges** of **Vienna** [or **battles** of **Vienna**, accept anything involving fighting in **Vienna**]

4. **If one of these structures is GF-four representable, then all GF-four representations of these objects are equivalent. R-sub-ten is a unique splitter for a certain class of these structures according to Seymour. One of these structures of rank r is uniform if and only if all of its circuits have exactly r plus one elements. The regular types of these structures can be represented over all fields and are precisely those that don't contain the four-point line, the Fano plane, and its dual. The Tutte polynomial of these structures is a generalization of the (\*)** characteristic polynomial to two variables. Maximal independent ones of these are bases. These are defined on a ground set and an independent collection of subsets. These structures provide strong connections between graph theory and linear algebra. For 10 points, name these combinatorial structures that generalize the concept of linear independence to matrices.

ANSWER: **matroid**s

5. **This ethnic group's midwives are helped by a Blue Woman Spirit, whose abode is a hole in the Big Dipper created when Fallen Star's mother pulled up a turnip. They claim that dead spirits called *nagi* can't cross the Sky-Road without showing tattoos to a crone known as Owl Maker. A goddess of these people named Anog Ite had one of her two faces made ugly after she was tricked into seducing the sun god Wi. A character in their mythology lures many ducks into his hut with songs, then kills and cooks them. These people refer to the sacred as *wakan* and call the** (\*) Great Spirit Wakan Tanka. A fabled White Buffalo Woman gave these people the pipe. Their creator god Inyan, or Rock, fathered the storm monster Iya and his trickster brother. For 10 points, name this Native American group which, like the Assiniboine, tells of the spider Iktomi, and whose sacred *heyoka* clowns claim to have seen the Thunderbird.

ANSWER: **Lakota** [or Oglala **Lakota**; or **Teton** Sioux; or **Dakota**; prompt on Sioux; prompt on Great Plains Indians or Native Americans or similar answers]

6. **A title character described by this noun befriends a nameless organ grinder who lives in a cave with a dog named Franz. That title character described by this noun becomes trapped by the inexplicable geography of the town of Wandernburg, where he falls in love with the already engaged Sophie Gottlieb. Another man described by this noun says the words “Little Pisser” while in a delirium. That character described by this noun is told that he raped the maid Juliette when he was fifteen, before paralyzing his best friend by throwing him down a staircase. Translating the poems in *Winterreise* inspired Spanish-Argentine author** (\*) Andrés Neuman to write a 2009 novel about one of these “of the Century.” The Renaud family tries to claim the amnesiac Gaston as their son in a play by Jean Anouilh titled for one of these “without Luggage.” For 10 points, the first line of “Ozymandias” describes meeting what sort of person “from an antique land”?

ANSWER: **traveler**s [or ***voyageur****s*; or ***viajero***; do NOT prompt on or accept “voyager” in English]

7. **This non-royal person was once able to gain access to Pope Leo X by surprising him with a selection of sweetmeats and jellies. After fighting as an English mercenary at the Battle of Garigliano, he was mentored by the Florentine banker Francesco Frescobaldi. His wife, Elizabeth, and two daughters would all die around the same time due to "sweating sickness." According to the Spanish Chronicle, he tortured a musician named Mark Smeaton in order to force him to confess to** (\*) adultery. This man legendarily lost favor after being suckered by a Hans Holbein miniature into selecting a supposedly repulsive German woman. The Pilgrimage of Grace objected to policies this adviser put in place shortly after he was tasked with visiting and "purifying" all the monasteries in England. For 10 points, name this man who lost his role as chief minister to Henry VIII after the failed arranged marriage with Anne of Cleves.

ANSWER: Thomas **Cromwell**

8. **A seminal effort at classifying representations of infinitely many of these relationships was done by Gårding and Wightman. Constructing a quantum field theory by quantizing a classical field theory can be thought of as reinterpreting dynamical variables as operators that obey an equal-time example of these relationships. An exponentiated group analog of a set of these relationships is said to be the Weyl form. For** (\*) Pauli matrices j and k, one of these relationships has a right-hand side of two i times the sum from l equals one to three of epsilon sub j k l times the Pauli matrix l. The uniqueness of a fundamental example of these relationships is given by the Stone-von Neumann theorem. For two operators A and B, the equation for AB minus BA is given this name. For 10 points, identify this type of relation exemplified by the fact that a certain operation applied to position and momentum equals i h-bar.

ANSWER: (canonical) **commutation** relations [accept **commutator**s, accept **anticommutation** relations before “sum” in the fifth line]

9. **This poem describes metaphysics discussions with a man who pretends his jaundice is a tan, before the speaker recalls a time when he had never heard of the Jehovah’s Witnesses. In the last stanza of this poem, its speaker lists the following objects: “a portable radio, a dresser, two toy American flags tied together with a ribbon of Easter palm.” This poem’s speaker recalls his daughter, who is young enough to be his granddaughter, “ris[ing] in her flame-flamingo infants’ wear” in a house of “hardly passionate** (\*) Marlborough Street,” which contrasts with the central location. The speaker of this poem sees the “T-shirted back” of its title character, who has a “little segregated cell full of things forbidden to the common man.” Inspired by the the poet’s imprisonment for conscientious objection during World War II, for 10 points, name this poem by Robert Lowell, partly titled for the Murder Incorporated hitman he met in jail.

ANSWER: “**Memories of West Street and Lepke**”

10. **In 1957, the Supreme Court ruled that Walter Korpan of Illinois had to pay a $250 federal tax levied on these things. Scott Slomiany made animations for these things and often included secret references to “DOHO”, his wife. Bill Budge released a software kit for constructing these things for the Apple II. Detective McPherson has a handheld predecessor of them, resembling a baseball diamond, in Otto Preminger's noir film *Laura.* In 1942, a sledgehammer was wielded against one of these things by Mayor** (\*) Fiorello LaGuardia, and they were banned in New York until Roger Sharpe emulated Babe Ruth and called his own shot to demonstrate the skill involved in mastering them. *Checkpoint* was the first of these things to use a dot matrix display. The first example of these devices to escape their bagatelle heritage was *Humpty Dumpty* by Gottlieb. For 10 points, name these devices on which one manipulates flippers so as to hit targets or bumpers with a metal ball.

ANSWER: **pinball** machines

11. **The Euclidean minimum spanning tree and modified Curl models characterize this process. As the extent of this process increases, the calculated area under a Levenspiel plot increases, and the RTD widens from a spike to a decaying exponential. In a device where this process is assumed *not* to occur, the axial Peclet number is infinite, and conversion is *maximized* at one minus the exponential of the negative Damköhler number. To facilitate this process, packed beds are fluidized. This operation is combined with** (\*) settling in liquid-liquid extractors. Assuming ideality, the free energy change from this process equals negative RT times the sum of “mole fraction times log of mole fraction.” This process does not occur at dead zones or in a plug-flow reactor, but is perfect in a CSTR, where it is done by an impeller. For 10 points, name this process which makes the concentration uniform throughout a chemical reactor, which is done in the lab using a magnetic bar.

ANSWER: **mixing** [or word forms; or **stirring**; or word forms; or **impelling**; or word forms; or **axial mixing**; or **backmixing**; prompt on moving ormotion or similar answers; do NOT accept or prompt on "solvation" or "dissolving"]

12. **Rules governing the original formulation of this concept were modified by Horn’s and Levinson’s Q-principles. The paper that introduced this concept discusses someone understanding “You are the cream in my coffee” ironically and metaphorically to mean “You are my bane.” Inferring an upper bound on a weak predication, such as “X is pretty” meaning “X is not beautiful,” is the scalar type of this concept. Conflict between that scalar form and the clausal form of this concept can be resolved via suspension. This concept is present when someone appears to flout the** (\*) maxims of quantity, quality, relevance, and manner, while still obeying the cooperative principle. This concept was coined in the paper “Logic and Conversation.” In pragmatics, the three primary ways to convey meaning in an utterance are: entailment, presupposition, and this concept. For 10 points, name this concept introduced by H. Paul Grice, a meaning that is suggested but not logically required by a statement.

ANSWER: conversational **implicature**s [or scalar **implicature**s; or **non-truth-functional meaning**s; do NOT accept or prompt on “implication,” “implied,” or other forms of the word “imply”]

13. **In the connecting episode between the first and second subject in this piece’s final movement, a four-bar staccato passage in G-flat major with a sforzando marking on every note is immediately repeated, sans markings, in F major. Although this piece’s *andante espressivo* second movement has an exposition in C minor, its recapitulation begins in F minor, minus the opening four measures, and eventually transitions without pause into the finale. Some of the themes of this piece may have been inspired by Jan Dussek’s Opus 44 of the same title. This piece’s three first dyads for the right hand are a G -** (\*) E-flat third, an F - B-flat fifth, and an E-flat – G sixth. This piece’s challenging last movement is marked *vivacissimamente* and titled “Das Wiedersehen” [VEE-dur-zay-in]. This piece opens by imitating the posthorn call of a departing carriage, over which the three syllables of “*Lebewohl*” [LAY-buh-vohl] are written. For 10 points, identify this Beethoven piano sonata, often titled for the French translation of “The Farewells.”

ANSWER: ***“Les******Adieux”*** sonata [or Ludwig van **Beethoven’s Piano Sonata No. 26** in E-flat major, **Opus 81a** (accept either piece number or opus number); accept ***Lebewohl*** or ***Farewell* sonata** until those words are read; prompt on Farewell]

[Following precedent for this answer’s previous appearance in quizbowl, and the practice of standard musical discourse (and in accordance with the ACF rules that “leading articles may be omitted” does not necessarily apply to foreign answers), the leading article has been underlined in its French nickname. Saying “adieu” in the singular and/or without the leading article simply means something different.]

14.  **Richard Page was court-martialed for destroying munitions after surrendering a fort near this city. After members lynched Michael Donald in this city, the United Klans of America went bankrupt after a seven million dollar lawsuit against them. Three hundred people were killed here when an ordnance depot on Beauregard Street exploded in May 1865. This city's Africatown consisted of slaves brought to America on the *Clotilde*, the last known ship to arrive in the Americas with African slaves. After the sieges of Forts Morgan and Gaines, Franklin** (\*) Buchanan was taken prisoner at this city, which is where the *Hunley* was built and tested by attacking a coal flatboat. It's not Atlanta, but the defeat of the *Tennessee* here was considered a tipping point to win Abraham Lincoln re-election. For 10 points, name this Confederate port near where David Farragut legendarily yelled "Damn the torpedoes, full speed ahead."

ANSWER: **Mobile**

15. **Math5 and other homologs of *atonal* are required for differentiation of cells in this structure. Its patterning is driven by Soho-1 and GH6 in chicks. During development, this structure is split by a transient acellular layer named for Chievitz. A compound *named* for it activates Lefty-1 transcription and patterns the hindbrain. In *Drosophila*, a wave of *hedgehog* creates the morphogenetic furrow during the development of the** (\*) nasotemporal axis of this structure, which proceeds by the induction of a single R8 cell. The namesake progenitors for this structure localize to the ciliary marginal zone or to its namesake pigmented epithelium. During differentiation, it produces Müller glia. Horizontal cells nest on this structure’s outer plexiform layer, one of seven layers that also include bipolar and amacrine neurons. For 10 points, name this light-sensitive tissue home to rods and cones.

ANSWER: **retina** [or **retinal pigmented epithelium**; prompt on eye]

16. **"Authoritative knowledge" surrounding this type of event has been studied by anthropologists such as Robbie Davis-Floyd and Carolyn Sargent. Attitudes toward it were compared *in Four Cultures* -- Holland, Sweden, the Yucatan, and the U.S. -- by Brigitte Jordan. Citing Dennis Werner, Marvin Harris has claimed that a society's tolerance of homosexuality is inversely related to its encouragement of this sort of event. John Whiting and Edward Burnett Tylor studied a process of imitating this type of event to garner sympathy, called *couvade.* Nisa witnesses one in the first chapter of Marjorie Shostak's *Nisa: The Life and Words of a !Kung*** [*tongue click*-koong] ***Woman*, which recounts her undergoing** (\*) five of them. Sheila Kitzinger advocated that de-medicalized "natural" form of it be done at home. Otto Rank wrote about the *Trauma* of, for 10 points, what act which can be assisted by *doula*s or midwives?

ANSWER: child**birth** [or giving **birth**; or **parturition**; prompt on pregnancy; prompt on child-rearing etc.]

17. **Edward Sylvester Morse noted that artwork frequently depicted this man in the center of a celestial body, reflecting a popular legend that he ascended to Mars following his death. He used his connections with English merchant Thomas Glover to provide firearms for a former rival in forming the Satcho Alliance. This man wrote to the future leader of the Freedom and People's Rights Party to explain a scheme where, as a diplomat, this person would antagonize another kingdom into murdering him, justifying war. This leader allied his domain with the Choshu, and during the** (\*) Seikanron debate he seemed to urge war with the Joseon kingdom. He died after his defeat at the Battle of Shiroyama, ending a revolt centered on his academy in Kagoshima. For 10 points, name this so-called "last true samurai," who led the Satsuma Rebellion and opposed the Meiji Restoration.

ANSWER: **Saigo** Takamori [or **Saigō** Kochiki; or **Saigō** Nanshū]

18. **Several characters in this work are annoyed when they are forced to eat in an indoor dining room instead of in an outdoor veranda lit by red lamps. After its narrator’s daughter runs naked into the ocean to clean her bathing suit, their entire family is arrested on the insistence of an outraged man in a bowler hat. In this work, after two men refuse to perform an arithmetic exercise because they cannot write, a youth who defends them suddenly doubles up with a stomach cramp after a speech about the cheap white wine he drank. This work’s antagonist repeatedly cracks a claw-handled** (\*) whip throughout a performance that takes place in the Italian town of Torre di Venere. The second title character’s final action is to pretend to be the first title character’s beloved Silvestra, tricking the latter man into kissing him. For 10 points, name this work in which the title waiter shoots the hypnotist Cipolla, a novella by Thomas Mann.

ANSWER: ***Mario and the Magician*** [or ***Mario und der Zauberer***]

19. **The landscape in Fra Bartolomeo's *Madonna and Child with the Young Saint John the Baptist* quotes from the background of this artist's *Virgin and Child and Two Angels* in the Uffizi. The crowned title figure kneels next to a wheel and spike and has a ring placed on her finger by Jesus in one of his works. He's not Hugo van der Goes, but a kneeling Tommaso Portinari and his wife flank the bottom corners of a Jerusalem cityscape by this artist with 23 scenes from the Passion of Christ. The Met owns his (\*)** *Mystic Marriage of St. Catherine*. Portinari’s partner, Jacopo Toni, commissioned a triptych by this artist seized by pirates which depicts souls entering the Gate of Saint Peter on the left and an armored Michael balancing souls on a scale in its center panel. For 10 points, name this student of Rogier van der Weyden, a German artist best known for his circa 1466 painting *Last Judgement*.

ANSWER: Hans **Memling**

20. **This speech contains the exhortation: “O judgment! Thou art fled to brutish beasts, and men have lost their reason.” After this speech, its speaker declares: “Mischief, thou art afoot! Take what course thou wilt!” The speaker of this speech disingenuously claims that he has “neither wit, nor words, nor worth, action, nor utterance, nor the power of speech, to stir men’s blood.” Its speaker declares “you are not wood, you are not stones, but men” to explain why he will not read another man’s** (\*) will. The speaker of this speech claims that when the poor cried, the subject of this speech wept, leading to the observation that “ambition should be made of sterner stuff.” It condemns a certain action as “the most unkindest cut of all.” After claiming “the evil that men do lives after them, the good is oft interred with their bones,” the speaker repeats three times that another character “is an honorable man.” For 10 points, name this speech which begins “Friends, Romans, countrymen, lend me your ears.”

ANSWER: Mark **Antony’s** **funeral** oration over Julius Caesar [prompt on partial answer, that indicates only the speaker or only the setting; accept any equivalent that makes it clear that Mark **Antony** is the speaker, and that Julius **Caesar is dead**]

21. **Nico Tassi wrote about this ethnicity's role in contemporary global trade in his book *The Native World System.* At about two years old, each child of this ethnicity gets a ceremonial first haircut called a *rutucha*. Architect Freddy Mamani is of this ethnicity and draws on its traditional art in his gaudy designs. Members of this ethnic group buy miniature versions of goods to improve their chances of getting normal-size versions in the coming year at Alasitas, a festival honoring their god Ekeko. The** (\*) *katarismo* movement which has sought to empower this group since the 1970s is named for the husband of martyr Bartolina Sisa. Its *yatiri* folk healers sell items at the Witches' Market. A world leader of this ethnic group leads his country’s Movement for Socialism and nationalized his country’s gas industry in 2009. For 10 points, name this indigenous group of Evo Morales, which inhabits the western part of Bolivia.

ANSWER: **Aymara** people

**Bonuses**

1. The Dirac gamma matrices define an example of these algebras called the spacetime algebra, or STA. For 10 points each:

[10] Identify these algebras which possess a namesake product defined as the sum of vector and wedge products.

ANSWER: Clifford **geometric** algebra [or **Clifford** geometric algebra]

[10] The complex quaternions are isomorphic to the Clifford algebra APS, so both methods can be used to write this set of electromagnetic equations as a single equation.

ANSWER: **Maxwell**’s equations

[10] In the 3-dimensional APS, the trivector volume element *i*, as in the imaginary unit, is an example of this type of quantity. This type of quantity has no direction, but still changes sign under parity inversion and does not have rotational invariance.

ANSWER: **pseudoscalar**s

2. In one novel by this author, Changez narrates his disenchantment with America to a tourist in Lahore. For 10 points each:

[10] Name this author of *The Reluctant Fundamentalist* and *How to Get Filthy Rich in Rising Asia*.

ANSWER: Mohsin **Hamid**

[10] Mohsin Hamid hails from this country, whose other authors include the Urdu author Saadat Hasan Manto and the Saraiki writer Ismail Ahmedani.

ANSWER: **Pakistan**

[10] In this satirical novel by Mohammed Hanif, Ali Shigri is one of several characters simultaneously plotting the assassination of real-life Pakistani president Muhammad Zia-ul-Haq.

ANSWER: *A* ***Case of Exploding Mangoes***

3. A mass conversion of Indians to this religion took place on October 14, 1956. For 10 points each:

[10] Name this religion to which B.R. Ambedkar and his *dalit* followers converted in part to reject the caste system. Some of its followers venerate teachers called *arhat*s.

ANSWER: **Buddhism** [or **Buddhist**; accept Dalit **Buddhism**; accept, but *do NOT reveal unless a team gives as their answer,* Navayana **Buddhism**]

[10] Dalit Buddhism is sometimes referred to by this Sanskrit neologism, which sets it apart as a more modern "vehicle" than the Mahayana or Theravada branches.

ANSWER: **Navayan**a [meaning "new vehicle"]

[10] An earlier exponent of modern Buddhism, Anagarika Dharmapala, attended this city's 1893 World Parliament of Religions to introduce many Westerners to Buddhism. Swami Vivekananda also attended that event here.

ANSWER: **Chicago**, Illinois

4. This piece begins with all the strings holding the G below middle C, until they one-by-one begin to glissando away from it at different time points. For 10 points each:

[10] Name this piece that was premiered in 1955. Its use of hyperbolic paraboloids of sound mass inspired the composer’s own design of the Philips Pavilion, which he designed for Le Corbusier.

ANSWER: ***Metastaseis***

[10] *Metastaseis* is by this 20th-century Greek composer, whose training as a mathematician is reflected in his book *Formalized Music*.

ANSWER: Iannis **Xenakis**

[10] Xenakis applied for lessons from this legendary music pedagogue, but was rejected. This Frenchwoman’s legion of students included Virgil Thomson, Astor Piazzolla, and Philip Glass.

ANSWER: Nadia **Boulanger**

5. For a rotating astronomical object, accurately measuring this quantity requires one to incorporate a factor of cosine of omega t, where omega is the angular speed in radians per second. For 10 points each:

[10] Identify this quantity that can be found by finding the spectrum of a galaxy or other object, then multiplying speed of light by the ratio of Doppler shift in wavelength and the original wavelength.

ANSWER: **radial velocity** [or **VR**; or **V-sub-R**]

[10] For a disk galaxy, these diagrams plot the contours of constant radial velocity that connect points with the same value of circulation velocity times cosine of phi.

ANSWER: **spider** diagram [or **spider** plot]

[10] On a spider diagram, a line through the nucleus and perpendicular to the velocity contours corresponds to this axis of the galaxy.

ANSWER: kinematic **major** axis

6. A moralistic interjection near the end of this poem warns, "He who seeks to harm his neighbor / Will be the victim of his own labor." For 10 points each:

[10] Name this narrative poem, which ends after a seneschal catches the title Lord of Nantes sleeping with his wife and throws her into a vat of boiling water.

ANSWER: "**Equitan**"

[10] "Equitan" is one of the many *lais* written by this 12th-century poet, who worked in the court of Henry II of England. She wrote a hagiography of Saint Audrey and *The Legend of the Purgatory of Saint Patrick.*

ANSWER: **Marie de France** [or **Marie of France**]

[10] Marie de France made the earliest French verse translation of this author. He wrote tales about a fox who cannot reach a bunch of grapes, and a dog with a bone who fights with his own reflection.

ANSWER: **Aesop** [or **Aisopos**]

7. Answer the following about Nicholas Katzenbach, for 10 points each.

[10] As a Deputy Attorney General in the Kennedy administration, Katzenbach confronted this governor during the 1963 Stand in the Schoolhouse Door incident in front of Foster Auditorium.

ANSWER: George **Wallace**

[10] As LBJ’s Attorney General, Katzenbach was the named plaintiff in this 1964 Supreme Court case which held that Congress acted within its Commerce power in prohibiting racial discrimination at private restaurants. It was decided at the same time as the similar *Heart of Atlanta Motel* case.

ANSWER: *Katzenbach v.* ***McClung*** [or ***McClung*** *v. Katzenbach*]

[10] Katzenbach sent a memo to this LBJ assistant suggesting what would become the Warren Commission. This aide became press secretary in 1965, investigated the sexual preferences of White House staffers, and is a member of the Television Hall of Fame.

ANSWER: Billy “Bill” **Moyers**

8. Identify the following about software usability, for 10 points each.

[10] One way to determine whether a design is more usable than another design is to run an A/B operation of this type on users of a website. Software is often subjected to “unit” and “acceptance” varieties of these things.

ANSWER: **test**s [or A/B **test**; or unit **test**; or acceptance **test**]

[10] User interfaces described by this seven-word term have a high degree of transparency. Bravo, a program for the Xerox Alto, was the first word processor to have this type of UI, and Microsoft FrontPage used this type of interface to shield users from having to manipulate the underlying HTML.

ANSWER: **What You See Is What You Get** [or **WYSIWYG**]

[10] This man, who popularized the term user-centered design, argued that the designer was generally to blame when users failed to use a device correctly in his influential text, *The Design of Everyday Things*.

ANSWER: Donald **Norman** [or Don **Norman**]

9. David Hume called this man “an excellent prince.” For 10 points each:

[10] Edward Gibbon could not stop singing the praises of this short-lived emperor,. His attempts at imposing reforms got him killed, with the throne being won in an auction by Didius Julianus. This ruler’s father-in-law, Sulpicianus, unsuccessfully tried to succeed him.

ANSWER: **Pertinax**

[10] Pertinax’s reign ended when he was killed by this group, which had previously assassinated their supposed employers, Caligula and Galba. This group was effectively disbanded by Constantine the Great.

ANSWER: **Praetorian** Guard [or ***Praetoriani***]

[10] Septimius Severus later deified Pertinax and poured substantial resources into the development of this African city, his birthplace, making it the third most important African city behind Carthage and Alexandria.

ANSWER: **Leptis** Magna [or **Lebda**; prompt on **Khoms**]

10. In IR spectroscopy, these compounds show a characteristic very wide W-shaped peak that extends from 3000 all the way down to about 2500 inverse-centimeters. For 10 points each:

[10] Name these compounds which show a proton NMR singlet shifted all the way downfield beyond 12 ppm. In mass spectrometry, they usually have M-1 and M-17 peaks, corresponding to loss of either a proton or hydroxyl.

ANSWER: **carboxylic acid**s [prompt on acids]

[10] Before gas chromatography, carboxylic acids are first esterified by reacting them with this compound. Homologation of carboxylic acids usually uses this explosive one-carbon compound as the carbon source.

ANSWER: **diazomethane** [or **CH2N2**]

[10] Because diazomethane is so dangerous, methylation for GC-MS is almost always done using a diazomethane substituted with this moiety. This moiety is used during endcapping to derivatize alcohols, and in another reaction, it protects enols from self-condensations.

ANSWER: **trimethylsilyl** group [or **TMS**; or **trimethylsilane**; or **Si(CH3)3**;; that’s the Mukaiyama aldol condensation]

11. A group devoted to this cause abducted and killed Pierre Laporte in the October Crisis. For 10 points each:

[10] Name this political objective that was narrowly rejected by voters in a 1995 referendum during the Mulroney government.

ANSWER: **Quebec** **independence** [accept word forms but require both **Quebec** and **independence**; accept **sovereignty** for “independence”]

[10] This founder of the Parti Quebecois is considered the spiritual father of the sovereignty movement. Noted for his ubiquitous comb over, he opposed Robert Bourassa, his predecessor in the position of Quebec’s premier, during the October Crisis.

ANSWER: Rene **Levesque** [luh-VEK]

[10] Following the loss of the pro-independence side in the 1995 referendum, Quebec premier Jacques Parizeau made a controversial speech in which he blamed these two things for that loss.

ANSWER: **money** and the **ethnic vote** [or l’**argent** et le **vote ethnique**; need both]

12. Answer the following about descendants of Heracles who got, and I quote from the submitted packet, "completely fucking wrecked," for 10 points each.

[10] In this war, Heracles's Rhodian son Tlepolemus got wrecked by Sarpedon, and his grandson Eurypylus got wrecked by Achilles' son Neoptolemus.

ANSWER: **Trojan** War [or **siege** of **Troy**]

[10] This son of Heracles invaded the Peloponnese in a myth analogous to the Dorian conquest. His sister Macaria wrecks herself sacrificially to help him in a Euripides play, and he weds Iole in Sophocles' *The Women of Trachis*.

ANSWER: **Hyllus** [or **Hyllos** or **Hyllas**, not that that matters to the ACF rules]

[10] According to Servius, this landmark of southwestern Rome is named for a son of Hercules who got wrecked on it. Virgil located Cacus's cave inside this landmark, where a temple to Bona Dea and Servius Tullius' temple to Diana once stood.

ANSWER: **Aventine** Hill [the dude's name was Aventinus]

13. This publication was founded as a Tory rival to the Whig *Edinburgh Review*. For 10 points each:

[10] Name this publication, whose main early columnists were John Wilson and William Maginn. It published nearly all of the novels of George Eliot, as well as Conrad's *Lord Jim* and *Heart of Darkness*.

ANSWER: ***Blackwood****'s Magazine*

[10] From 1871 to 1872, *Blackwood's* serialized this Eliot novel, which ends with the marriage of Will Ladislaw and Dorothea Brooke.

ANSWER: ***Middlemarch***

[10] In 1849, *Blackwood's* published this essay, which is divided into three sections, including "The Glory of Motion" and "The Vision of Sudden Death." Its "Dream-Fugue" transforms the title object into a "triumphal car" speeding down an infinitely long aisle of a cosmic cathedral.

ANSWER: "The **English Mail Coach**"

14. On the orders of the Empress Dowager Lǚ, the Lady Qī was blinded and her arms, legs, and tongue were all cut off. For 10 points each:

[10] What derisive two-word animalistic name did the Empress Dowager Lǚ then gave the mutilated Lady Qī?

ANSWER: **human pig** [or **human swine**; or **rénzhì**; or **rénwèi**; or obvious equivalents indicating a **porcine person**]

[10] Lady Qī and Empress Dowager Lǚ were both consorts of this emperor, who defeated rival Xiang Yu at the Battle of Gaixia to defeat the Western Chu.

ANSWER: **Gāozǔ** [or **Liú Bāng**]

[10] Another Chinese person who had a body part removed was this Muslim admiral, who sailed widely across the Indian Ocean during the early Míng dynasty.

ANSWER: **Zhèng Hé** [or **Mǎ Hé**]

15. This artist's *Lion Attacking a Horse* was inspired by a classical sculpture which had been recently excavated. For 10 points each:

[10] Identify this sculptor of the Artichoke Fountain in Florence.

ANSWER: Giovanni Francesco **Susini** [or Gianfrancesco **Susini**]

[10] Susini was a student of this sculptor who first made a name for himself with the Fountain of Neptune in his namesake hometown. The three figures form a spiral in this artist’s Mannerist marble sculpture, *Rape of the Sabine Women*.

ANSWER: **Giambologna** [or Giovanni da **Bologna** or Jean **Boulogne**]

[10] Susini's sculptures *Cupid Breaking a Heart with a Hammer* and *Cupid Shooting an Arrow* are located in the Island Basin of this Florentine park behind the Pitti Palace. Planning for this park began under Niccolo Tribolo.

ANSWER: **Boboli** Gardens [or Giardini di **Boboli**]

16. Wilhelm Dilthey ["dill" "tie"] was one of many thinkers in this sub-discipline to ponder the relationship between the parts and the whole of a work, a problem known as this sub-discipline’s “circle.” For 10 points each:

[10] Name this philosophical sub-discipline concerned with the study of interpretation, most often the interpretation of texts.

ANSWER: philosophical **hermeneutics**

[10] This German author of *On Religion: Speeches to its Cultured Despisers* is sometimes called the “father” of hermeneutics. He formed the distinction between “grammatical” and “psychological” forms of interpretation.

ANSWER: Friedrich (Daniel Ernst) **Schleiermacher**

[10] The concept of the hermeneutic circle is variously credited to Schleiermacher or to this antagonist of his, a German philologist and author of the *Lexicon Platonicum*, who claimed that many of the most studied Platonic dialogues—such as *Ion, Euthyphro,* and *Crito*—were spurious.

ANSWER: (Georg Anton) Friedrich **Ast**

17. This opera ends with a choral setting of parts of Brecht’s poem “To Posterity,” and its 1961 premiere caused a neo-Fascist riot where demonstrators yelled “Viva la polizia!”. For 10 points each:

[10] Identify this opera by Luigi Nono for tape, orchestra, chorus, and loudspeakers. It set texts by such authors as Jean-Paul Sartre and Paul Eluard, denouncing racism and colonialism.

ANSWER: ***Intolleranza*** *1960*

[10] *Intolleranza 1960* premiered at this Venice opera house, which received its nickname because it was repeatedly rebuilt after being burnt down.

ANSWER: *Teatro La* ***Fenice*** [feh-NEE-chay]

[10] This other Italian opera premiered at *La Fenice* in 1851. In it, the title jester’s daughter Gilda overhears the Duke of Mantua singing the aria “La donna è mobile.”

ANSWER: ***Rigoletto***

18. For 10 points each, answer the following about applications of social science to classrooms.

[10] This taxonomy of educational goals has three overlapping domains, the cognitive, psychomotor, and affective. It is often displayed graphically as a *Trivial Pursuit* pie-like shape or as a six-tier pyramid which builds up from “remember” to “create”.

ANSWER: **Bloom**’s taxonomy

[10] Recent studies have asked if this personality trait, a type of resilience against adversity evaluated on a 12-item test developed by Angela Duckworth, may be a good predictor of classroom performance. It probably isn't.

ANSWER: **grit** [do not accept or prompt on any synonyms]

[10] Anthropologist Jean Lave and computer scientist Etienne Wenger studied this type of learning, which takes place as students gain more insight from a pre-existing “community of practitioners”.

ANSWER: **situated** learning [or **legitimate peripheral participation**]

19. This play’s narrator works in a shoe warehouse with Jim O’Connor, whom another character characterizes as a “gentleman caller.” For 10 points each:

[10] Name this play narrated by Tom Wingfield, who describes a disastrous night involving his sister Laura.

ANSWER: *The* ***Glass Menagerie***

[10] In the climactic last scene of *The Glass Menagerie*, Tom tells Laura to blow out her candles, because “nowadays the world is lit by” this phenomenon, instead.

ANSWER: **lightning**

[10] Christopher Durang parodied *The Glass Menagerie* in this one-act play, in which Amanda tries to find a “feminine caller” for her son Lawrence, who collects cocktail stirrers.

ANSWER: ***For Whom the Southern Belle Tolls***

20. Because this quantity is unchanged by intercalation, the sedimentation coefficient is minimized at a particular concentration of ethidium bromide. For 10 points each:

[10] Name this quantity which is defined to be the sum of twist and writhe. DNA is supercoiled when the change in this quantity is negative.

ANSWER: **linking number** [or **Lk**]

[10] The class II type of these enzymes are so named because they either increase or decrease the linking number by two. These enzymes introduce supercoiling into native DNA and can also relieve coiling strain.

ANSWER: class II DNA **topoisomerase**s

[10] The linking number can be calculated by dividing the number of base pairs by the number of nucleotides per turn, which for relaxed B-DNA is closest to this integer. A variant of an alpha helix that repeats every three residues contains this many atoms in a cross-section of the ring.

ANSWER: **10**

21. A traditional hooded cloak called the għonnella [awe-nel-la] has fallen out of fashion on this island since the early half of the 20th century. For 10 points each:

[10] Name this island whose cities include Mdina, which lies over an old capital, and Vittoriosa, which lies on its Grand Harbor. Its namesake language is the only Semitic language written in Latin letters.

ANSWER: **Malta** [do not accept wrong answers]

[10] The entire island of Malta received this award from the British Empire for its citizens' valor in World War II. It's not "independence" -- that came two decades later.

ANSWER: **George Cross**

[10] The rotunda of this Maltese city's church features the third largest unsupported dome *in the world*! During World War II, a "miracle" preserved mass-goers in this city when a bomb pierced the dome but failed to explode.

ANSWER: **Mosta**