

Valencia Delta Burke Invitational 2013
Round 11

1. In the *Mahabharata*, the eldest of the Pandava brothers, Yudisthira, undertakes this action with the use of Indra's chariot in order to find his wife and brothers. Odin's son Hermod undertook this action by using his father's horse Sleipnir to leap over the bridge Gjallarbru. Sex disappeared from earth when Ishtar undertook this action, shedding a piece of clothing at each of seven gates on the way. Heracles did this in order to rescue Theseus, who had earlier done this with Pirithous in order to rescue Persephone. FTP what is this action Aeneas undertook in order to visit his dead father, a common mythic voyage?

ANSWER: descent into the underworld (accept equivalents; or katabasis)

2. The relationship between temperature and this quantity is given by the Steinhart-Hart equation. Tunnel diodes have a negative value for this quantity, whose changes are measured by the most common type of strain gauge. The proximity and skin effects cause increases in this quantity with increasing frequency. The time constant tau is equal to inductance divided by this quantity in an RL circuit. An unknown value of this quantity can be determined with a Wheatstone bridge. This quantity is the real part of impedance in AC circuits, and it is equal to voltage divided by current. For 10 points, name this opposition to the flow of current that is measured in ohms.

ANSWER: resistance

3. Lionel Sackville-West endorsed this man for president in the Murchison letter. This man had an illegitimate child with Maria Halpin, and he used the campaign slogan "a public office is a public trust." This president sent troops to end the Pullman strike. Republicans who supported this Democrat instead of Blaine in the 1884 election were known as mugwumps, and he defeated Benjamin Harrison in a rematch in 1892. For 10 points, name this man who served two non-consecutive terms as US President.

ANSWER: Grover Cleveland

4. In retaliation for the killing of the leader of a group in this country, a Jordanian suicide bomber carried out the Camp Chapman attack. CIA contractor Raymond Davis killed two men in this country, which was also the site of a Marriott Hotel bombing. A girl who was shot in the head while riding the bus home from school and wrote the book *I Am Malala* is from this country. The head of this country's Taliban was recently killed by a drone strike in its North Waziristan region. Mamnoon [*mahm-NOON*] Hussain succeeded Asif Ali Zardari [*zahr-DAH-ree*] as president of this country. For 10 points, name this country that has often fought India over control of Kashmir.

ANSWER: Pakistan

5. In one work by this author, Simon Jordan investigates the murder of Nancy Montgomery and Thomas Kinnear by the titular housemaid. This author of *Alias Grace* depicted pigs with extra organs called pigoons and unsafe cities known as pleeblands in a 2003 novel centering on a character named Snowman, who survives a plague. This author of *Oryx and Crake* wrote a dystopian novel set in the Republic of Gilead in which Offred [*uhv-FRED*] has to bear a child for an infertile couple. For 10 points, name this female Canadian author of *The Handmaid's Tale*.

ANSWER: Margaret Atwood

6. One musical work about this event is a *Dies Irae* whose chorus chants words over an improvised rhythmic framework. That work was written by Krzysztof Penderecki. The second movement of Steve Reich's *Different Trains* is set during this event, which also inspired a work whose final movement quotes the folk song "He lies in a grave, I know not where". A Sprechstimme work that ends with the singing of the Shema Yisroel tells a story of this event. For 10 points, name this event memorialized by Schoenberg's *A Survivor From Warsaw* and Gorecki's *Symphony of Sorrowful Songs*, the latter of which uses text written on the wall of a Gestapo prison cell.

ANSWER: the Holocaust [prompt on less specific stuff like World War II]

7. Rabbi Meir claimed that these people came from the tribe of Issachar, although according to the Talmud they were originally natives of the city of Cuthah. This people's request to Sargon II led to them being derisively called "proselytes of the lions." These people worshiped the image of a dove that they built in their temple on Mt. Gerizim. Members of this ethnicity include a woman from Sychar who was encountered at Jacob's Well and a man contrasted with a Priest and a Levite by coming to the aid of a man who was left for dead. FTP, name this people, represented by a "Good" individual in one of Jesus's parables.

ANSWER: Samaritans

8. In the urea cycle, it is produced along with citrulline in the reaction catalyzed by ornithine trans-carbamylase. Minerals containing this group include turquoise and apatite. In the first step of the Calvin cycle, a substance with two of these groups is carboxylated. Glycolysis begins with the transfer of one of these groups to glucose by the enzyme hexokinase. The major energy source in the cell consists of the nucleobase adenine, the sugar ribose, and three of these groups. For 10 points, name this ion that is found in the backbone of DNA and has the formula PO_4^{3-} .

ANSWER: phosphate [prompt on formula answers]

9. The mention of the town of Toomsboro and the description of the killer's "black, hearse-like automobile" foreshadow the killings of six characters at the end of this short story. The snotty children June Star and John Wesley constantly abuse their parents and grandmother in this story, and the cat Pitty Sing causes a car crash when it springs from a picnic basket. The killer in this story says his name derives from his inability to decide whether Jesus raised the dead or not. FTP the Misfit kills a family at the end of what ironically titled short story by Flannery O'Connor?

ANSWER: "A Good Man Is Hard to Find"

10. These people rioted in Paris on Shrove Tuesday of 1229 after some were thrown out of a pub; later Blanche of Castile sent city militia who killed a number of these people. A 1766 protest led by these people began with a cry of "Behold, our butter stinketh!" leading to the Butter Rebellion led by Asa Dunbar, Henry David Thoreau's grandfather. Daniel Cohn-Bendit and the UNEF, the largest union of these people, led protests famous for slogans like "Beneath the cobblestones, the beach!" in Paris in May of 1968. FTP four people of what category were shot by National Guardsmen at Kent State in 1970?

ANSWER: college students (accept equivalents that include a synonym for college)

11. One variety of this economic concept arises from maximizing utility within a fixed budget, and another arises from setting a target level of utility and minimizing cost. Those are related to each other by the Slutsky equation and are known as its Marshallian and Hicksian forms. In macroeconomics, this is equal to the sum of consumer spending, government spending, private investment, and net exports, called its aggregate form. For 10 points, identify this economic concept which describes the willingness of consumers to pay a price for a good or service, often paired with supply.

ANSWER: demand

12. This man was placed in charge of all museums during the Paris Commune. This artist painted his sisters in *The Village Maidens*, and his self-portraits include *The Desperate Man* and *The Wounded Man*. A pair of nude women recline in his *The Sleepers*, and he depicted the crotch of James Whistler's girlfriend, Joanna Hiffernan, in *The Origin of the World*. This artist is also known for a large work shown in its own tent that features George Sand, Charles Baudelaire and other of the artist's friends. FTP, name this painter of *The Artist's Studio* who depicted a funeral procession in *A Burial at Ornans*.

ANSWER: Gustave Courbet

13. This structure was transplanted by Robert Briggs and Thomas King into a frog cell. The dye DAPI is used to stain this structure, which contains Cajal [*kah-HAHL*] bodies. Importins and exportins move molecules into and out of this structure, respectively. Intermediate filaments known as lamins line the inner surface of this structure, which is surrounded by a double membrane. One of its substructures includes a granular component and is a site of ribosome production. For 10 points, name this structure that contains DNA organized into chromosomes.

ANSWER: nucleus

14. This author asked "Why should I blame her that she filled my days with misery?" in "No Second Troy" and wrote about "Lion and woman and the Lord knows what" in "The Circus Animal's Desertion." One of his poems describes "sing[ing]...of what is past, passing, or to come" after addressing "sages standing in God's holy fire". This author wrote "the best lack all conviction, while the worst are full of passionate intensity" in a poem that asks, "What rough beast...slouches towards Bethlehem to be born?" The line "That is no country for old men" begins this author's poem "Sailing to Byzantium." For 10 points, name this author of "The Second Coming".

ANSWER: W(illiam) B(utler) Yeats

15. Tensions arose between this nation and the United States in 1793 when it didn't allow US planes to use its airspace on bombing flights against Muammar Khaddafi. The first party divisions in the US partly began when Jeffersonian republicans supported this country's grievances after the Jay Treaty. US ships frequently engaged this country's navy in the late 18th century in the undeclared Quasi War. FTP what nation's navy helped blockade British forces at Yorktown at the end of the Revolutionary War, led by Admiral de Grasse and General Rochambeau?

ANSWER: France

16. Archaeologists are working on this area's Island of the Four Mountains to find more evidence of the hunter-gatherers called the Unangan. The Akutan Volcano lies on a namesake island in this group; the group's namesake tribal people inhabit the volcano's foothills. Popoff Island features Sand Point, home of the Russian-built St. Nicolas Chapel. Its westernmost and largest island was site of fighting between US and Japanese forces in WWII despite its harsh arctic conditions. Attu is the largest island in, FTP, what chain off the southern coast of Alaska?

ANSWER: Aleutian Islands

17. This poet addressed Ramon Fernandez in a poem that begins, "She sang beyond the genius of the sea." Another of his speakers compares himself to a tree after saying, "I was of three minds" and asks, "O thin men of Haddam,/ why do you imagine golden birds?" This author also wrote about "the dresser of deal, lacking the three glass knobs" in a poem that exhorts, "Let be be finale of seem." He wrote "Idea of Order at Key West," "Thirteen Ways of Looking at a Blackbird" and a poem that begins, "Call the roller of big cigars." For 10 points, name this author of "The Emperor of Ice Cream."

ANSWER: Wallace Stevens

18. This philosopher considers the paradox of rule-following and includes the example of a builder and his assistant using the words block, pillar, slab and beam to depict the difference between private and public language-games. Another of this thinker's works claims that "All propositions are of equal value" while examining the truth of 7 propositions that include the famous statement, "Whereof one cannot speak, thereof one must be silent." For 10 points, name this author of *Tractatus Logico-Philosophicus* and *Philosophical Investigations*.

ANSWER: Ludwig Wittgenstein

19. In a method named for Gauss for this process, Legendre polynomials are used when the weight function equals one. Changing the order of this process is allowed by Fubini's theorem. The disk and shell methods use this technique to find the volume of a solid of revolution. Methods for this process include the Newton-Cotes formulas, one of which is Simpson's rule. The acronym LIATE can be used as a guideline in performing it "by parts." For 10 points, name this process from calculus that can be used to find the area under a curve, and is the inverse of differentiation.

ANSWER: integration [or quadrature; also accept word forms, such as "taking the integral"]

20. This country was the site of the 1994 AMIA bombing of a Jewish community center that killed 85 people. This country is home to the Mothers of the Plaza de Mayo human rights organization. Jorge Rafael Videla was president of this country during the Dirty War, when thousands of its citizens were forced to disappear. One war lost by this country in 1982 resulted in the sinking of the *General Belgrano*, and one leader of this country was supported by the descamisados, or "shirtless ones." For 10 points, name this South American country that lost the Falklands War, and was once ruled by Juan Peron, whose second wife was known as Evita.

ANSWER: Argentina

Delta Burke 2013
Round 11 Bonuses

1. This conflict was split into two portions by the Peace of Nicias. FTPE:

[10] Name this war fought between Athens and Sparta that was chronicled by Thucydides [thoo-SID-ih-deez], and which saw Athens launch the disastrous Sicilian Expedition.

ANSWER: Peloponnesian War

[10] During the Peloponnesian War, Sparta fought against this coalition of cities dominated by Athens after Pericles moved the treasury from its namesake island.

ANSWER: Delian League [prompt on "Delos"]

[10] The Peloponnesian War was essentially decided following this naval battle during which Lysander utterly demolished the Athenian navy at the mouth of the namesake river.

ANSWER: Battle of Aegospotami [ee-guhs-POT-uh-mahy]

2. Answer the following about a certain Type 40 time travel capsule. For 10 points each:

[10] This object, which is used by the Doctor to travel, is depicted as a blue London police box.

ANSWER: TARDIS [or Time and Relative Dimension in Space; or Sexy]

[10] The Doctor first borrowed the TARDIS while on this planet, home of the Time Lords.

ANSWER: Gallifrey

[10] In an episode of *Doctor Who* written by this man, the spirit of the TARDIS takes the form of a madwoman who calls herself "Sexy." This man also wrote the novel *American Gods*.

ANSWER: Neil Gaiman

3. Haskalah refers to the "enlightenment" period of social and philosophical ferment for these people. FTPE:

[10] Moses Mendelssohn, grandfather of the composer, is a key figure in the canon of what religion, having provided commentaries on the Mishna and Gemara?

ANSWER: Judaism

[10] An earlier Jewish thinker was this author of *The Guide for the Perplexed*, written in Arabic.

ANSWER: Maimonides (or Moses ben Maimon or RamBam)

[10] *The Guide for the Perplexed* offers commentary on these first five books of the Tanakh given a word meaning "teaching" in Hebrew.

ANSWER: Torah

4. Name these items sometimes found in a chemistry laboratory, for 10 points each.

[10] These items can be used with filter paper to isolate suspended solids from a liquid. The separatory type is often used in liquid-liquid extractions.

ANSWER: funnels

[10] One of these items named for Buchner has a side-arm useful in vacuum filtration. The type named for Erlenmeyer has a flat, wide base, conical shaped body, and cylindrical neck.

ANSWER: flasks

[10] This type of flask, which is often used for distillations and refluxing, often has a round bottom that allows the uniform heating of a liquid. This type of flask shares its name with a European city.

ANSWER: Florence flask

5. The painter Giorgione [*jawr-JOH-nee*] depicted this mythological figure "sleeping." FTPE:
[10] Name this Roman goddess of love and beauty whose "birth" was depicted by Botticelli.

ANSWER: Venus

[10] This artist was commissioned by Niccolo Aurelio to depict a bride in white sitting on a sarcophagus next to Venus in *Sacred and Profane Love*, and he also painted *Venus of Urbino*.

ANSWER: Titian [*TISH-uhn*] [or Tiziano Vecelli or Tiziano Vecellio]

[10] This court artist of King Philip IV painted *The Surrender of Breda* and the *Rokeby Venus*, the latter of which shows the title figure looking into a mirror held by Cupid.

ANSWER: Diego Velazquez

6. The first story in this collection, "Rocket Summer," was published in 1950 and is set in 1999. FTPE:
[10] What linked collection of sci-fi stories details the colonization of a certain planet by Earth people and includes the penultimate story, "There Will Come Soft Rains"?

ANSWER: "The Martian Chronicles"

[10] "The Martian Chronicles" was written by this author of *The Illustrated Man* and *Dandelion Wine*.

ANSWER: Ray Bradbury

[10] Mr. Dark tempts and scares Jim Nightshade and William Halloway in this Bradbury novel that takes its title from a line said by one of the witches in Macbeth.

ANSWER: Something Wicked This Way Comes

7. Lake Oroville, near Sacramento, is created by the tallest of these structures in the US. FTPE:

[10] What are these structures that come in arch, gravity, and embankment forms and which retain water?

ANSWER: dams

[10] Originally called Boulder Dam, this arch-gravity dam creates Lake Mead, the largest fresh-water reservoir in the US.

ANSWER: Hoover Dam

[10] This huge dam on the Yangtze River was functionally completed in 2012 despite controversy over its flooding of numerous cultural and historical sites.

ANSWER: Three Gorges Dam

8. This Alabama college officially began on July 4, 1881. FTPE:

[10] What is this private, historically black college founded by the author of the biography *Up from Slavery*?

ANSWER: Tuskegee Institute

[10] This founder of Tuskegee advocated a gradual approach to gaining equality for African Americans, leading to opposition from W.E.B. Dubois [doo-boyce].

ANSWER: Booker T. Washington

[10] Washington endorsed the idea of segregation as working like separate fingers on the same hand in an important speech he gave at the cotton exposition in this city.

ANSWER: Atlanta (Compromise)

9. Brain hormone stimulates the production of this hormone, which is secreted from the prothoracic glands, and has an active form that contains an OH group at the twenty position. FTPE:

[10] Name this hormone that triggers molting in insects and crustaceans.

ANSWER: ecdysone [or 20-hydroxyecdysone; or 20E; or ecdysterone; or beta-ecdysone]

[10] Insects and crustaceans belong to this phylum, whose members have an exoskeleton.

ANSWER: Arthropoda [or arthropods]

[10] The hormone ecdysone regulates the puffing activity of the polytene type of these structures. The short and long arms of these structures are dubbed p and q, respectively.

ANSWER: chromosomes

10. Catholic children often participate in this ritual for the first time around the ages of 8-10. FTPE:

[10] What is this ritual eating of a wafer and drinking of red wine in a Catholic mass?

ANSWER: Eucharist or Holy Communion

[10] Catholic doctrine still states that the wafer and wine literally become the body and blood of Christ upon ingestion, a doctrine given this name.

ANSWER: transubstantiation

[10] Communion is one of seven of these rituals in Catholicism, others of which include baptism and last rites.

ANSWER: sacraments

11. This poem was written two months before its author married Sara Fricker, whose "soft cheek reclined," and the title object of this poem is "placed length-ways in the clasping casement." FTPE:

[10] Identify this conversation poem named for an instrument sounded by the wind.

ANSWER: "The Eolian Harp" [ee-OH-lee-uhn]

[10] "The Eolian Harp" was written by this poet, whose other works include "Frost at Midnight" and "Christabel," along with one that states "Water, water, every where / Nor any drop to drink."

ANSWER: Samuel Taylor Coleridge

[10] This poem by Coleridge, the writing of which was interrupted by a "person from Porlock," describes the title figure's "stately pleasure-dome" in Xanadu, where "Alph, the sacred river, ran."

ANSWER: "Kubla Khan"

12. Answer the following about a notable case study of classical conditioning in children. FTPE:

[10] What was this experiment where a young boy was made to fear otherwise benign and mostly furry things like a white rat?

ANSWER: Little Albert experiment

[10] This American psychologist conducted the Little Albert experiment.

ANSWER: John Watson

[10] Due to his work with Maxwell House, Watson is sometimes credited with helping to popularize these periods of inactivity during a work shift where a certain caffeinated beverage may be consumed.

ANSWER: coffee breaks

13. Jacques Offenbach's opera *The Tales of Hoffmann* contains "Belle nuit, o nuit d'amour," which is one of these compositions that are usually in 6/8 or 12/8 time. For 10 points each:

[10] Name this type of musical composition often performed by Venetian gondoliers.

ANSWER: barcarolles [or barcarolas]

[10] This man composed a famous barcarolle in F sharp major. Other works for piano by this Polish composer include the "Heroic" Polonaise, the "Minute" Waltz, and numerous mazurkas.

ANSWER: Frederic Chopin [*SHOH-pan*]

[10] Works of this type by Chopin include one that was inspired by the November Uprising, and another in which the right hand primarily only plays D-flat, E-flat, G-flat, A-flat, and B-flat.

ANSWER: etudes

14. Answer the following about physicist Paul Dirac, the namesake of FSU's science library, FTPE.

[10] Dirac's equation is a relativistic generalization of this equation, which describes the wavefunction of a system. Its namesake devised a thought experiment involving a cat.

ANSWER: Schrodinger's equation

[10] Dirac and this physicist name a class of statistics that applies to half-integer spin particles.

ANSWER: Enrico Fermi

[10] Dirac's large numbers hypothesis states the value of Big G, the gravitational constant, is inversely proportional to the value of this quantity, which is approximately 13.75 billion years.

ANSWER: age of the universe [or equivalents, such as cosmic time]

15. Benny Profane, the protagonist of this novel, gets a job hunting alligators in the sewers of New York. FTPE:

[10] What is this novel titled after a single letter in which the title entity is searched for by Herbert Stencil?

ANSWER: V

[10] V. is a novel by this reclusive author of *Gravity's Rainbow* and *The Crying of Lot 49*.

ANSWER: Thomas Pynchon

[10] This female protagonist of *The Crying of Lot 49* bears an unlikely feminine form of the name of this mythic figure who was depicted as "Rex" and "at Colonus" in two plays by Sophocles.

ANSWER: Oedipus (accept Oedipa Maas)

16. Answer the following about flying things in Greek myth, FTPE:

[10] In one story, from the blood of Medusa sprung this winged horse later ridden by Bellerophon.

ANSWER: Pegasus

[10] Xanthus and Balius, the immortal horses of Achilles, were the offspring of Podarge, one of these winged woman-demons, who once plagued the dining table of Phineus.

ANSWER: Harpies

[10] Neoptolemus launched this infant son of Hector to his death from the walls of Troy at the end of the Trojan War. In keeping with the theme, technically his flight time was rather limited.

ANSWER: Astyanax [also accept Scamandrius]

17. A 1981 strike of specialized workers was broken by the U.S. president. FTPE:

[10] What type of worker was represented by the union PATCO, all members of which were fired?

ANSWER: air traffic controllers (prompt on reasonable alternatives)

[10] The strike of air traffic controllers was broken by this president, himself the only president to have been a union member.

ANSWER: Ronald Reagan

[10] Reagan ordered the strikers back to work under terms of this doubly eponymous 1947 act which outlawed closed shops and weakened unions.

ANSWER: Taft-Hartley Act (or Labor Management Relations Act of 1947)

18. Answer the following about Earth's moon, for 10 points each.

[10] These volcanic plains, which are made up of basalt, were originally thought to be seas.

ANSWER: mare [or maria]

[10] This seven-letter adjective, which is often contrasted with crescent, is used to describe the moon's phase when it appears more than half illuminated but less than fully illuminated.

ANSWER: gibbous

[10] These long and narrow trenches located on the surface of the moon are divided into three types: sinuous, arcuate, and straight. Apollo 15 landed near one of these named for John Hadley.

ANSWER: rilles

19. The unhealthy relationship between the brothers Zachariah and Morris was described as a “Knot” of this type in a play by Athol Fugard. FTPE:

[10] What word describes the kin relationship in that Fugard work and completes the title of a novel by Ngugi Wa’Thiongo describing “Petals of” this type?

ANSWER: blood

[10] Fugard is a playwright from this African country, also original home to the Nobel-winning novelists J.M. Coetzee and Nadine Gordimer?

ANSWER: South Africa

[10] Ngugi’s *Petals of Blood* and *A Grain of Wheat* are novels set during the Mau Mau Rebellion and other events leading to the independence of this east African nation, his home.

ANSWER: Kenya

20. This man launched the Komaki Campaign and won the Battle of Nagakute against the forces of Toyotomi Hideyoshi. FTPE:

[10] Name this man who ended the Sengoku Period by unifying Japan under a namesake shogunate that ruled until the Meiji Restoration.

ANSWER: Ieyasu Tokugawa

[10] The Tokugawa Shogunate was founded following Tokugawa’s victory at this 1600 battle in which he defeated troops led by Mitsunari.

ANSWER: Battle of Sekigahara

[10] The Battle of Sekigahara saw the use of the Arquebus, a muzzle-loading predecessor to these modern weapons.

ANSWER: rifles (accept firearms or guns or reasonable equivalents—let’s be nice)