

The Herbert Spencer Memorial Singles Tournament
Only The Strongest Will Survive

Set: 5
Round: Playoff 2

1. Before arriving here, a pregnant woman was released at Benghazi and five million dollars ransom was demanded from the French government. Dan Shomron coordinated Operation Thunderball, which, in addition to freeing Captain Michael Bacos and all hostages, destroyed the entire fighter wing of the Ugandan Air Force on the way out. FTP, name this city at which the passengers of Air France Flight 139 were freed from Baader-Meinhof/PLO hostage-takers by Israeli Defense Force commandos.

ANSWER: Entebbe

2. After Antarctica, it's the coldest of all deserts. Only five percent of its area is covered with sand; the rest is dry, rocky soil. In the north, there is enough scrub vegetation to support the raising of nomad livestock. Several mountain ranges meet its outskirts, including the Greater Khingan, the Tian Shan, and the Altay. FTP, identify this desert of northern China and Mongolia.

ANSWER: Gobi [accept Sha-mo]

3. Asked by Ford Motor Company to suggest names for a new car, she proposed a list including "Magigravue," "Pastelogram," and "Mongoose Civique;" Ford bypassed her list and chose "Edsel." While studying for biology and histology degrees at Bryn Mawr, she published nine poems, including "A Jelly-Fish." That and poems such as "No Swan So Fine," "The Jerboa," "The Pangolin," and, from her 1924 *Observations*, "An Octopus," are some of her many works which use animals as symbols. FTP, name this author who wrote in the work *Poetry*, "I, too, dislike it."

ANSWER: Marianne Craig Moore

4. Founded by Abahai of the Jurchen, its forces were allowed into China to combat the rebellion of Li Zicheng. Its early years were spent subjugating the Three Feudatories and Taiwan. After initial strength, events such as the Heshen embezzlement and White Lotus Rebellion sparked a long decline. FTP, name this dynasty which disintegrated under pressure from Western nations and the Kuomintang, China's final dynasty.

ANSWER: Manchu dynasty [accept Qing dynasty]

5. The poet apologizes for breaking "Nature's social union" with "Man's dominion." Speaking in the titular fashion, the poet declares "The present only toucheth thee:/But Och! I backward cast my e'e,/On prospects drear!" and then compares the plans of humanity to those of the "Wee, sleeket, cowran, tim'rous beastie." FTP, identify this poem, written to the title animal "on turning her up in her nest, with the plough, November, 1785" by Robert Burns.

ANSWER: "To a mouse"

6. To conserve lepton number, a neutrino is emitted; this reaction powers the massive neutrino emissions which typify a type II supernove. A typical reaction, the decay of carbon-11 to boron-11, leaves the mass number unchanged, but is endothermic, unlike positron emission. FTP, name this decay mode, so called because the particle treated as consumed is generally from the lowest level.

ANSWER: electron capture [or k-capture]

7. At it, quantum mechanics predicts that an inherent energy remains, in contrast to the classical model. For a constant volume of gas, the functions of pressure versus temperature for all gasses converge to it. FTP, give the two-word name for this lowest possible temperature.

ANSWER: absolute zero

8. They start a chain reaction of oxidation that destabilize vital molecules by changing properties such as solubility. A blood or urine test for isoprostanes that were oxidized and removed from cell membranes is the best known way to measure the presence of these highly energetic molecules. Antioxidants counteract their activities by stabilizing them until an enzyme can neutralize them by combining two together. FTP name these neutral but volatile species, the term given to any molecule with an unpaired electron.

ANSWER: free radicals

9. Jem Rodney and a tinderbox-carrying traveling peddler are accused of theft, but the real culprit is someone who was desperate for money after accidentally killing the horse Wildfire. Dunsey Cass and the stolen gold end up in the stone-pits, protecting the secret of Molley Farren, the drunken wife of Godfrey. FTP, name this novel in which Godfrey and Molley's son Eppie is adopted by the title character, set in Raveloe and written by George Eliot.

ANSWER: Silas Marner

10. Only Gram negative bacteria produce these macromolecules, whose molecular weight of 5 to 25 kilodaltons consists of a Lipid A section that produces toxicity and is similar in all species, and three polysaccharide chains that interact with antibodies and vary greatly between species. They cause most of their damage by being dispersed when bacteria like Salmonella, E. coli, and Neisseria burst and cell walls disintegrate. FTP identify the antigens responsible for septic and toxic shock syndromes, whose name comes from their fixed location lodged inside the cell wall.

ANSWER: endotoxins [accept lipopolysaccharides before the end]

11. After leaving the team with which he's most associated, he played for the Eagles and Cowboys before retiring in 1972. Ten years later, he became head coach for the team that he'd won Rookie of the Year honors with in 1961. The highlight of his final coaching job was posing on the cover of ESPN magazine next to a wedding dress-clad Ricky Williams. FTP, name this football personality, an All-American for Pitt in 1960 who went on to win the 1986 Super Bowl as coach of Da Bears.

ANSWER: Mike Ditka

12. She can appear at any age, from child to crone, and she usually dresses in black. Born at Honua-Mea on Tahiti, she was exiled by her father, Kane Milohai, due to her temper. She traveled in a canoe, digging pits for homes which became various craters, finally settling on the Navel of the World, Mount Kilauea. FTP, name this Polynesian goddess of lightning, fire, volcanoes, and possibly bicycle kicks.

ANSWER: Pele

13. Karl Uecker and Thane Eugene Cesar held each of his arms and Bill Barry was his bodyguard. However, they were not enough to prevent someone else from sliding around a steam table shortly after this man shook the hand of busboy Juan Romero. Rafer Johnson, George Plimpton, and Rosey Grier were among the group which

apprehended the man who shot him at the Ambassador Hotel in Los Angeles. FTP, name this man who was assassinated by Sirhan Bishara Sirhan in 1968.

ANSWER: Robert Francis Kennedy [prompt on Kennedy]

14. Eugene Wright on double bass. Paul Desmond on alto sax. Joe Morello on drums. That's all that was needed to join with the namesake pianist and create a group which injected new time signatures into jazz. FTP, name this group which recorded the album *Time Out*, featuring "Blue Rondo á la Turk" and "Take Five."

ANSWER: Dave Brubeck Quartet

15. An alternate version of this story ended with the townspeople searching for the title character's head. All the voices become sarcastic upon the one hundredth reading of this work, which was written by Mabel Syrup, who also penned a sequel, *Commander Coriander Salamander and 'er Single Hander Belly Lander*. FTP, identify this work which Calvin often requests that Dad read.

ANSWER: Hamster Huey and the Goopy Kablooie [prompt on Hamster Huey]

16. It's violated in the presence of peroxides. The use of pi electrons causes the non-receiving sp² carbon to become a "carbocation intermediate," with a positive charge, which will, at the end of the reaction, end up attached to the anion of the reagent. FTP, name the rule which states that, when a reagent H-Y is reacted with an asymmetric alkene, the hydrogen attaches to the sp² carbon with the most hydrogens.

ANSWER: Markovnikov's rule

17. Auden's "The Sea and the Mirror," Chaucer's "Complaint to His Lady," and Archibald MacLeish's "Conquistador" are all composed in this form. It ends with a standalone line which rhymes with the line two lines before. Individual lines are iambic, and in each verse, the first and final lines of each rhyme with the middle line of the previous one. FTP, identify this tercet-based form used in "Ode to the West Wind" and Dante's *Comedia*.

ANSWER: terza rima

18. Take the representative matrix equation and find the partial derivatives of each. Minimize the resultant system of equations by setting them equal to zero and solving to get the necessary coefficients. FTP, name this general technique for computing the closest curve to the given points.

ANSWER: least squares regression

19. It was the site of anti-U.S. riots in 1964, when Robert Fleming, Jr., was governor and a controversy existed over which flags were to fly where. Major cities once within it are Cristóbal, Balboa, and Ancon. Held by the U.S. from 1904 to 1979, it was the birthplace of John McCain. FTP, name this area which extended from five miles out of either side of something that left U.S. control in 1999.

ANSWER: Panama Canal Zone [do not prompt on "Panama"; prompt on "Panama Canal" before "area"]

20. Reversing the flow of time can easily be shown to be equivalent to reversing the sign of all charges by using one of them. The Higgs boson and gluons are represented distinctly from other bosons, and all are distinct from fermions; a dashed line and a series of loops indicate the former, while a wave and straight line show the latter. FTP, name these embedding diagrams used to visualize particle interactions, created by a

bongo-playing physicist.
A: Feynman diagrams