1. As general manager of the Padres in 1989, he traded sub-par pitcher Greg Booker, who was also his son-in-law, to the Twins. His first managerial job came in 1973 with the Kansas City Royals. In 1999, he was named NL manager of the year, but was fired by the Reds just one year later. For 10 points-name this man who won a second manager of the year title after replacing Jeff Torborg and leading the Florida Marlins to a World Series pennant.

Answer: Jack McKeon
2. Its drift current due to the diffusion of positive and negative charge carriers is counteracted by the electric field formed by stationary ion cores in the depletion region. It is subject to avalanche breakdown if a large voltage of incorrect polarity is applied, and it is often modeled by a resistor in series with an ideal voltage source. FTP, what is this nonlinear circuit element used in wave rectifiers?

## Answer: $\quad$ diode (accept: pn junction)

3. It all started when Governor William Cosby decided to fire the Chief Justice of New York. This questionable act prompted editorialist James Alexander to publish a criticism in the New York Weekly Journal, and the angry governor had the owner of that newspaper arrested on charges of libel. After an eloquent defense by Andrew Hamilton, the jury returned a "not guilty" verdict. FTP, name this 1735 trial which established an early precedent for a free press.

Answer: the John Peter Zenger Trial
4. In act one the title character is scolded for killing a swan; when he is questioned, he can't remember his name or his origin. In act two the flower maidens fail to seduce him, but after a passionate encounter with Kundry he finally understands the meaning of Amfortas' suffering. In act three he returns to the Grail Wood on Good Friday and is knighted. For 10 points-name this opera about an "innocent fool," written by Wagner.

## Answer: $\quad$ Parsifal

5. The epilogue of this novel reveals that Reid and Ruby have gotten married. The former is a companion of Stobford and the latter is an assistant hired by Ada Monroe to tend the farm left by her deceased father. In the aftermath of the Battle of the Crater, the protagonist, a soldier named Inman, deserts and makes his way back to his home, pursued by the Home Guard. FTP name this Charles Frazier novel recently adapted into a movie starring Jude Law and Nicole Kidman.

Answer: Cold Mountain
6. According to a legend, it was a task given to the priests at a Hindu temple which, if solved, would bring about an end to the world. Assuming one correct move per second, and 2 to the 64 th power minus one moves, that's about 585 billion years. Fortunately for students, modern computers can finish the job much more quickly. FTP, what is this puzzle, a common exercise in recursive algorithm design?

Answer: Tower(s) of Hanoi
7. After receiving a degree in architecture in the United States, he followed the advice of his grandfather and worked for six months as a banker in South Africa. In 1945 he was arrested by the Soviets, who have since claimed that he died of a heart attack in 1947. In 1981 he was made an honorary citizen of the U.S. FTP, name this Swedish humanitarian who saved the lives of over 100,000 Hungarian Jews during the Holocaust.

Answer: Raoul Wallenberg
8. Literally "Land of Upright People," this nation achieved independence from France in 1960. The Mouhoun River flows through the western region of this landlocked country situated between the Sahara Desert and the Gulf of Guinea. Its flag consists of two horizontal stripes, one red and one green, with a yellow star at the center, and it shares its border with six other countries including Mali and Niger. FTP identify this African nation, formerly known as Upper Volta, whose capital is Ouagadougou.

Answer: Burkina Faso
9. Androgyno is the hermaphroditic servant of the title character, whose other servant is Mosca. The foolish Sir Politic Would-Be is called "the parrot." Other characters with avian nicknames include Corvino "the crow," Corbaccio "the raven," and Voltore "the vulture," all of whom aspire to become heir to, and are the subjects of plots by, the title character. For 10 points-name this Ben Jonson play about a crafty character.

## Answer: $\quad$ Volpone, or The Fox

10. Only twenty percent of these are of the juxtamedullary variety, in which the Loop of Henle passes into the medulla. The main component is the glomerulus, in which podocytes allow for the filtration of molecules from the blood by wrapping the capillaries. Counter-current circulation allows for a high osmolarity difference, which concentrates the waste products. FTP, identify this functional unit of the kidney.

Answer: nephron (Don't prompt on kidney)
11. Its second chapter begins, "All in the world recognize the beautiful as beautiful. Herein lies ugliness."It follows with other paradoxes which have puzzled many thinkers, including Han Feizi and Zhuangzi. It is traditionally attributed to Laozi, but modern evidence seems to refute this. For ten points, name this Zhou Dynasty text which begins, "the dao that can be followed is not the eternal dao."

Answer: Dao de Jing (Tao Te-Ching, Classic of the Way of Power, The Way and its Power)
(Prompt on "dao" or "tao." Do not accept "I Ching" - that's something else entirely.)
12. Cory quits his job at the supermarket to play high school football. His father wins a discrimination suit against Mr. Rand, which lets him be the first black employee to drive the garbage trucks. Troy admits to Bono that he's been having an affair with Alberta, who dies in childbirth in act two, and Cory is eventually thrown out of the house in-for 10 points-what play by August Wilson?

## Answer: Fences

13. Born in 1729 to an obscure German prince, she was the betrothed of Karl Ulrich, whom she married in 1745. She was extremely well-read and corresponded with many of the great thinkers of her day, including Voltaire and Diderot. Unhappily married, she took on numerous lovers up to her death at the age of 67, including Stanislaw Poniatowski, who became the king of Poland as a result of her influence. FTP, name this Empress of Russia who reigned from 1762 to 1796.

Answer: $\quad$ Catherine II or Catherine the Great
14. A chemical shift in carbon-13 NMR of 160 to 185 parts per million indicates the presence of this functional group, which can be formed by adding Jones' reagent to a primary alcohol, or by reacting an aldehyde with Tollens' reagent. It can be converted into a reactive acyl [AY-sil] chloride by treatment with thionyl chloride. For 10 points-name this functional group in which a carbonyl and a hydroxyl group are attached to the same carbon.

Answer:
carboxylic acid(s) or carboxylate(s)
15. While in his mid 20 's, this artist was involved in a street fight where he crippled a foe using a staff. Among his works are reliefs of St. George and the Dragon and of Herod's feast. He also created the sculptures of the five prophets. An artist of Florence, he was one of the first Italian sculptures of the renaissance, working with everything from wood to bronze. FTP, name this man who shares his name with a much more modern staff-wielding reptile.

## Answer: Donatello

16. As a teenage boy he was kidnapped and enslaved by marauders, after nine years of hardship he escaped to France. He willingly returned back to the country that enslaved under the belief he was to convert the entire nation to Christianity. FTP, name the patron saint of Engineers whose day of feast occurs in mid-march.

Answer:
St. Patrick
17. His parents were Lithuanian, and this led to being cast in ethnic roles in much of his early television career; he was a Russian student on Mr. Novak, a Swedish businessman on Gidget, and an Arabian singer on I Spy. More recently, he has done voiceovers for Star Trek video games, and published his autobiography, Warped Factors: A Neurotic's Guide to the Universe. FTP, name this actor who had a recurring guest role as the psi-cop Alfred Bester on Babylon 5, but is still best known as Pavel Chekov from the original Star Trek.

Answer:
Walter Koenig
18. Best thermodynamically modeled by the Flory-Huggins model, these types of molecules have only been known of for a little over 80 years. Once theorized that they could not exist, they now make up a large portion of industry. The first one was discovered using the free-radical reaction with ethylene. FTP, name this "chained" type of chemical structure.

Answer: Polymers [prompt on plastics]
19. While on trial, his lengthy opening statement included a story about his daughter Taliba who allegedly took cookies from a cookie jar when she wasn't supposed to. Represented by attorneys Peter Greenspun and Jonathan Shapiro, the court initially granted him the right to defend himself, however he gave up on that idea after two days. Linked to 14 shootings including 10 murders, FTP who is this partner of Lee Malvo sentenced to death in November 2003 ?

Answer: John Allen Muhammad (prompt: DC sniper or equivalent)
20. The main character has a tendency to be trusting and blunt, as well as impetuous and determined, in contrast to his more discerning friend Olivier. The work tells the story of how he, with his sword Durendal and horn Olifant, and a force of twenty thousand French are ambushed by the Saracens. FTP, identify this French epic that tells of the defeat of the title character in the rear guard at Roncesvalles.

Answer: "The Song of Roland" or Chanson de Roland
21. He attended the University of Cincinnati on a basketball scholarship, but he did not stay because he was offered a pro baseball contract as a pitcher. In his first 6 major league seasons he bounced back and forth to the minors and only won 3 major league games. Following a catcher's advice to try to get batters to hit his pitches rather than miss them, his career turned around for his last 6 seasons. Before arthritis shut him down, he got 129 wins in those six years, including 3 no-hitters and one perfect game. FTP, name this Dodger great.

Answer: Sandy Koufax
22. Some think it is related to Riemann's hypothesis, though all we're told is that it's the answer to an old conundrum. Claire doubts its authorship, as does Hal, which devastates Catherine because she gave him the notebook containing it after she fell in love with him. Hal thinks it's the work of her father Robert, a deceased and insane math genius. For 10 points-name this title object of a 2000 Pulitzer Prize-winning play by David Auburn.

Answer: $\quad$ Proof [accept the (or a) proof]
23. Bill James uses it to evaluate won-lost records; if it equals winning percentage, then wins times winning percentage plus games-over-. 500 equals wins. Its more well-known properties include the fact that its complement equals its square and that adding one to it yields its inverse. FTP, identify this number, the limit of the ( $\mathrm{n}-1$ )th divided by nth terms of the series " $1,1,2,3,5, \ldots$ " as it goes to infinity, and to the ratio between sides of the most attractive rectangles.

Answer: Golden Mean or Section ,or Fibonacci's number, or -( $1 / 2$ minus rad 5 over 2) or .618...
24. Spanning the period between the American Civil War and the end of WWI, this novel highlights the conflicts of two generations of brothers, the first being the wild Charles and his kindly brother, Adam who is eventually shot and left by his wife, Cathy Ames, an unfaithful former prostitute. FTP, name this 1952 work set in the Salinas Valley, which is a symbolic recreation of the story of Cain and Abel, by John Steinbeck.

Answer: $\quad$ East of Eden

1. Answer the following questions about muscle cells FTPE.
a) This is the functional unit of a muscle cell, containing both thick and thin filaments.

Answer: sarcomere
b) This is the protein to which ATP binds to activate the muscle.

Answer: myosin
c) This is the special name given to the endoplasmic reticulum in muscle cells.

Answer: sarcoplasmic reticulum
2. Only three times in the $20^{\text {th }}$ century did third-party candidates earn at least ten electoral votes. 5 points per answer. [5/5/5] Name the three years in which those elections took place.

Answer: $19 \underline{24}, 19 \underline{48}$, and $19 \underline{68}$
[5/5/5] In any order, name the third-party candidates who earned electoral votes in those years.
Answer: $\quad$ Robert LaFollette; (James) Strom Thurmond; $\underline{\text { George Wallace [prompt on "Wallace"] }}$
3. Identify the following characters from Samuel Beckett's play Waiting for Godot FTPE.

1. [10] This companion of Vladimir, whom he calls Gogo, is absent-minded and often appears weak and helpless.

Answer: Estragon
2. [10] This character visits Estragon and Vladimir in Act I accompanied by his slave. He needs a running start to exit the stage, and in Act II he is blind.

Answer: Pozzo
3. [10] This slave of Pozzo dances in Act I but cannot think without his hat. In Act II, he can't speak.

Answer: Lucky
4. Name these paradoxes, 10 points each.
[10] This paradox of fluid mechanics states that a body in an irrotational, non-viscous flow produces no drag. It stems from neglecting the effects of viscosity.
Answer: d'Alembert's paradox
[10] One person travels to a distant location and back. The other remains on earth. According to special relativity, one will appear to have aged more.
Answer: $\quad$ twin paradox
[10] Two people participate in a race. One is given a head start. The other must lose because he cannot reach the infinite number of points between them.
Answer: Zeno's paradox
5. [30] Soon after its founding in 1939, the National Baseball Hall of Fame inducted an inaugural class of five players - two outfielders, one shortstop, and two pitchers. Name them F5PE or 30 for all 5 correct.

Answers: Ty Cobb, Honus Wagner, Christy Mathewson, Babe Ruth, Walter Johnson
6. This wasn't what Bryan Adams had in mind, but FTSNOP answer these questions about the year 69 CE:
[5] For five, which dynasty ruled China in 69?
Answer: Han dynasty
[5 to 15] 69 was the year of the four Roman emperors. Five points for two, ten for three, or fifteen for all four, name them.

Answers: Galba, Otho, Vitellius, Vespasian
[10] In the year 69, Jewish Zealots held what rock fortress on the western shore of the Dead Sea, where they would evade Roman capture by mass suicide four years later?

Answer: Masada
7. Show your knowledge of the "ABCs" of computing technology by identifying these terms for ten points each. [10] This is a more sophisticated form of bot that can make a decision based on guidelines and perform a task without human supervision.

Answer: intelligent agent
[10] This four-letter term refers to the unit of speed in data transmission equal to the transmission of one bit per second.
Answer: baud
[10] This is a small text file, often containing personal information, that a website uses to gather and maintain information about that site's visitors.

Answer: $\quad \underline{\text { cookie }}$
8. Given the opening lines to a book, name the book's author FTPE. If you need the book's title you'll earn only 5. 1. [10] "Marley was dead, to begin with. There is no doubt whatever about that . . ."
[5] A Christmas Carol
Answer: Charles Dickens
2. [10] "Left Munich at $8: 35 \mathrm{pm}$, on $1^{\text {st }}$ May, arriving at Vienna early morning; should have arrived at $6: 46$, but train was an hour late. Buda-pest seems a wonderful place . .."
[5] Dracula
Answer: Bram Stoker
3. [10] "It was four o'clock when the ceremony was over and the carriages began to arrive . . ."
[5] The Jungle
Answer: Upton Sinclair
9. For fifteen points each, arrange the following quartets of items from earth science in a specified order.
[15] Layers of the Earth's atmosphere, from lowest to highest: mesosphere, thermosphere, stratosphere, troposphere
Answer: troposphere, stratosphere, mesosphere, thermosphere
[15] Minerals on the Mohs scale, from softest to hardest: corundum, fluorite, gypsum, quartz
Answer: $\quad$ gypsum (2), fluorite (4), guartz (7), corundum (9)
10. FTPE, name the artists from creations.

1. [10] Chrysanthemums; Card Players; The Abduction; A Modern Olympia

Answer: Paul Cézanne
2. [10] Boys in a Pasture; The Morning Bell; Early Morning after a Storm at Sea; Snap the Whip

Answer: Winslow Homer
3. [10] Ecstasy; In the Garden of Allah; Daybreak

Answer: Maxfield Parrish
11. FTSNOP name the kingdoms these African monarchs ruled.
[5] Mansa Musa [MAHN-suh MOO-suh]
Answer: Mali
[5] Menelik II
Answer: Ethiopia
[10] Askia Muhammad Toure [tur-AY]
Answer: Songhai
[10] Jugurtha
Answer: Numidia
12. Answer the following about stereochemistry.
[10] This type of solution will have no optical activity, but not because it lacks optically active molecules.
Answer: racemic mixture
[10] This process is the separation of a racemic mixture of a single compound in two. In each part the molecules rotate plane-polarized light either clockwise or counter-clockwise.

Answer:
resolving or resolution
[10] In 1848 Louis Pasteur became the first to resolve a racemic mixture by painstakingly
separating the crystallized enantiomers (pronounce: en-ant-ya-mers) of what acid known to him as racemic acid?
Answer: $\quad$ tartaric acid or tartarate
13. [30] One hallmark of Saturday Night Live is the development of recurring characters. Given such characters, name the performer F5PE.

1. Leon Phelps, the Ladies' Man

Answer: Tim Meadows
2.Understanding

Answer: Horatio Sanz
3. Opera Man

Answer: Adam Sandler
4. the Church Lady

Answer:
Dana Carvey
5. Roseanne Rosannadanna

Answer: Gilda Radner
6. Unfrozen Caveman Lawyer

Answer: Phil Hartman
14. Her poetry focused on love, Christian faith, and death. 10 points each.
[10] Name this Chilean winner of the 1945 Nobel Prize in Literature.
Answer: $\quad$ Gabriela Mistral [mee-STRAHL] [or Lucila Godoy y Alcayaga]
[10] Mistral took her pen name from this French poet of pastoral odes and Provençal patriot who won the 1904 Nobel Prize in Literature.
Answer: $\quad$ Frédéric Mistral
[10] This poet who wrote "Theme for English B" and "The Dream Deferred" published an English translation of Mistral's poetry shortly after her 1957 death.
Answer: (James) Langston Hughes
15. FTPE, give the nickname for the WWII plane given its military designation. For example, if I give you Type Zero-Zero, you would respond "Zero "

1. [10] P-51

Answer: Mustang
2. [10] P-38

Answer: Lightning
3. [10] F4U

Answer: Corsair
16. FTSNOP, answer the following about the Mormon religion.

1. [10] This man is credited with its founding.

Answer: Joseph Smith
2. [10] Smith said he was visited by this angel, who told him about ancient records detailing God's interactions with early inhabitants of the Americas.

Answer: Moroni
3. [10] The Book of Mormon is dramatized in an annual pageant named for the location where Smith is said to have found those records carved on golden plates. FTP name either the specific location, or the nearby town listed by many sources as the church's birthplace.

Answer: either the Hill Cumorah or Palmyra, N.Y. [accept Manchester Township, but nobody'll say that]
17. F5PE or 30 for all correct, given a state, name the incumbent U.S. Senator runing for re-election in 2004.
[5] California
Answer: $\quad$ Barbara Boxer
[5] Kentucky
Answer: Jim Bunning
[5] New York
Answer: Charles Schumer
[5] Vermont
Answer: Patrick Leahy
[5] Wisconsin
Answer: Russell Feingold
18. Name these hiking trails, 10 points each.
[10] This continuous marked footpath runs over 2000 miles from Katahdin in Maine to Springer Mountain in Georgia. Answer: Appalachian Trail
[10] Just 84 miles long, this England trail parallels its ancient namesake.
Answer: Hadrian's Wall Trail
[10] Spanning the distance from Canada to Mexico, this trail takes a hiker through California, Oregon and Washington.
Answer: $\quad$ Pacific Crest Trail
19. Name these literary terms, 10 points each.
[10] A short, pithy sentence which expresses principles in a few words. Mill wrote a fragment on them.
Answer: aphorism
[10] A metrical foot containing two long, or stressed, syllables.
Answer: $\quad$ spondee [or spondaic]
[10] A figure of speech in which a part is used to symbolize the whole, or vice versa: "hands" for "sailors," or "the law" for "the policeman."

Answer: $\quad$ synecdoche [SIH-nik-DOH-kee]
20. Given the following Messier object, name the constellation in which they are found, for ten points each.

1. [10] M31

Answer: Andromeda
2. [10] M13

Answer: Hercules
3. [10] M57

Answer: Lyra
21. Name these theorems related to complex functions, 10 points each.
[10] This "integral theorem" says the integral of an analytic function around a loop in a simply-connected domain vanishes.

Answer: $\quad$ Cauchy('s) integral theorem
[10] Any simply-connected proper subset of the complex plane can be mapped by an analytic function to the unit disk.
Answer: $\quad$ Riemann mapping theorem
[10] In any neighborhood of an essential singularity, a function will assume every complex value, with at most one exception.

Answer: Picard's theorem
22. Name these pharaohs of Egypt's Fourth Dynasty, 10 points each.
[10] The second pharaoh of the dynasty, he is the namesake of the largest pyramid in Egypt.
Answer: $\quad$ Cheops or Khufu or Khnomkhufwey
[10] Of the three great pyramids at Giza, the smallest was built for this pharaoh, Khufu's grandson.
Answer: $\quad$ Mycerinus or Menkaure
[10] The first pharaoh of the dynasty was this pharaoh, whose Bent Pyramid sits at Dashur.
Answer: $\quad$ Snefru or Snofru
23. For ten points apiece, please identify the airline given their corporate headquarters location by airport call letters. For example: $\mathrm{H}-\mathrm{O}-\mathrm{U}$ corresponds to Continental Airlines.

1. [10] A-T-L

Answer: either Delta or Air Tran
2. [10] O-R-D

Answer: United
3. [10] D-F-W

Answer:
American

