Ben Gross

1. He is born, he observes, he has a change, he falls into disgrace. He has a memorable birthday, he is neglected and is provided for, he is a new boy in more senses than one. He visits Steerforth at his home, he falls into captivity with Dora, he makes a last retrospect . For ten points, according to that selection of chapter titles, this describes what Charles Dickens' novel and namesake character, who has not once made the Statue of Liberty disappear?

Answer: David Copperfield
2. The drop in potential across one is proportional to the square of the current, while the voltage drop is proportional to the first derivative of current with respect to time. Thus it is a better circuit element for modeling nerve axons than a resistor, because it is designed to oppose changes in voltage while allowing the passage of current. For 10 points-name this circuit element, represented in diagrams as a coil, whose inherent property is measured in henrys.

Answer: inductors
3. This province has towns named Blow-Me-Down and Come-by-Chance, as well as Tickle Cove. And don't forget the town of Dildo . The Churchill River (formerly the Hamilton) is at 200 miles its longest river, and which ends in a series of waterfalls and cataracts of the same name. For ten points, give the province whose capital is St. John's, and which is located in eastern Canada.

Answer: Newfoundland (Officially it's "Newfoundland and Labrador")
4. He attempted an acting career in New York before taking an interest in politics and joining the Socialist Party, as well as founding the radical Harlem newspaper The Messenger in 1917. A prominent orator, he planned to protest civil rights violations with a March on Washington in 1941 that was ultimately called off in exchange for FDR's executive order banning discrimination in defense hiring. For ten points, name the man who is best-known for founding the Brotherhood of Sleeping Car Porters in 1920.

Answer: Asa Philip Randolph
5. A A 1998 documentary about a gay motorcycle club in Marin County. Rowan Atkinson's boss in Johnny English. A Federation starship whose experiments with phased cloaking technology led to disaster. The possessor of the Millennium Eye and inventor of the Duel Monsters card game in Yugi-Oh! A constellation where the first extrasolar planets were discovered in 1996. FTP, what name do all of these things share with a mythological winged horse?

Answer: Pegasus
6. In essence, the fictional computer chip on which the 1991 movie Sneakers centered was a solution to this problem in math, cryptography, and computer science . Using the Turing model of a computer, the problem asks if every language accepted by some nondeterministic algorithm in polynomial time is also accepted by some deterministic algorithm in polynomial time. For ten points, name this "millennium problem" which basically asks whether there exist solutions to some problems that are easy to check but not to compute.

Answer:
The $\underline{\mathbf{P}}$ vs. NP Conjecture
7. This leader came to power in 1946 as the first popularly elected president of his country since 1930, and who almost immediately nationalized the phone system from American interests and the railroad system from the British. Though his populist practices saw a brief but remarkable period of growth in his country's economy, unrest from massive inflation as well as military instability ultimately led to his exile in 1955. For ten points, name this autocratic ruler of Argentina from 1946-55, as well as 1973-74.

Answer: Juan Perón
8. Ludwig Minkus wrote a score for a ballet about this character, Picasso painted him, and Faulkner claimed the story about him was his favorite book, along with the Bible. The story to which the character lends his name was published in two parts, first in 1605 and then in 1615, and is one of the most-translated works of fiction in the world today, including into English more than 20 times. For ten points, name this "Man of La Mancha," the companion of Sancho Panza, and the creation of Miguel de Cervantes.

Answer: Don Quixote (accept Alonso Quijana; prompt on "Man of La Mancha" before it's said) 9. Recently the 1984 Mattel action figure for this cartoon character was available on Ebay for just two dollars,
a good price even if the thigh-high white boots have a few scratches. This superhero had a trusted unicorn that went by the name of "Spirit Wind." She was separated from her parents and twin brother after being kidnapped by the evil Hordak and raised on the planet of Etheria. For ten points, who would Princess Adora transform into "by the power of Greyskull"?

Answer: $\quad$ She-ra (accept: "Princess Adora" before it appears in the clue)
10. A 2002 study showed that about 1 in 7 NFL players studied-about five times higher than expected-tested positive for this condition, including 1 in 3 linemen. That study focused on the obstructive form of this condition, exacerbated by obesity, whose complications can include heart disease, strokes, and fatigue. For 10 points-name this condition, derived from the Greek for "without breath," characterized by periods when a sufferer stops breathing while asleep.

Answer: sleep apnea
11. Tracing its origins to the Yoruba people of western Africa, this set of religious beliefs is based on the worship of Orisha, or "guardians". According to some studies, there are believed to be about 22,000 practitioners of this religion in the United States. One of its churches has successfully petitioned the Supreme Court against the city of Hialeah, Florida, banning government interference in religious animal sacrifice. For ten points, name this religion whose name translates as "The Way of the Saints."

Answer: $\quad$ Santería (also accept "Regla de Ocho" or "La Regla Lucumi")
12. The antipsychotic drug haloperidol, most commonly used to treat schizophrenia and manic psychosis, is occasionally used to treat this less common neurological disorder. The onset is before age 18 and the disturbance causes marked distress or significant impairment in social, occupational, or other important areas of functioning. FTP, what syndrome is often associated with involuntary sniffing, snorting, multiple tics and the random explosive utterance of obscenities?

Answer: Tourette's Syndrome (accept "Tourette's Disease")
13. Born on August 28, 1938, in Windsor, Ontario, he began his career in business, as an executive in the Power Corporation of Canada and then as Chairman and CEO of Canada Steamship Lines. First elected to the House of Commons in 1988, he was Minister of Finance in Jean Chrétien's government until 2002, when he quit to run for leadership of the Liberal Party, to which he was elected in November 2003. For ten points name this man who in December 2003 became Prime Minister of Canada.

## Answer: Paul Martin

14. Though also the acronym for the American association of the sport of freediving, this name is more commonly known as the title of an opera that debuted at the Cairo Opera House in 1871, for which it was commissioned. "Ritorna Vincitor" is one of only three arias in this work, which centers on Radames, Amneris, and the title character. For ten points, name this opera, recently reconceived on Broadway by Disney, but originally written by Giuseppe Verdi.

Answer: $\quad$ aida
15. "Microsoft Patents Ones and Zeroes." "Church Group Offers Homosexual New Life in Closet." "Russian Television Scores Hit With New Game Show Who Wants to Eat a Meal?" "School Shooting Solves All of Troubled Youth's Problems." "Dolphins Evolve Opposable Thumbs; 'Oh, Shit,' Says Humanity." FTP, these headlines all appear in what comedy newspaper, which has issued such compilations as Dispatches from the Tenth Circle and Our Dumb Century?

Answer:
The Onion
16. X-ray diffraction shows peak ratios of $3,4,8,11,12$, etc. for this type of cell. With four atoms per unit cell, the structure factor has four terms which force the Miller indices to either be all even or all odd for X-ray diffraction to occur according to Braggs' Law. This is a close packed structure, a feature that contributes to the ductility of aluminum, gold, copper, and silver. With all three lattice parameters equal and perpendicular, FTP, which Bravais lattice features a cube with atoms in the center of each face?

## Answer: Face Centered Cubic

17. This dictator was a locksmith's apprentice before deciding to join his country's Social Democratic Party. After fighting in World War I and joining the Russian Communist Party, he pushed for resistance against the Nazi threat, and declared himself leader of his country's government in exile. By November 1945 he was elected president, a position he would hold until his death in 1980. For ten points, name the man whose strong control led to
a measure of independence from the USSR for Yugoslavia.
Answer: Marshal Josip Broz Tito
18. Some of this author's lesser-known works include Running in the Family and Anil's Ghost. Canadian-born, this man won the Booker Prize in 1992 for his best-known work, the movie-version of which won a Best Director award among other Oscars in 1996. For ten points, name the author who described the trials of Hana, Caravaggio, Kip, and the mysterious title character at the end of World War II in The English Patient.

Answer: Michael Ondaatje
19. His father wanted him to stay with the family's textile business, so he sent him first to Bremen, and later to England to manage a mill there. This man drew on his experiences in Britain in writing his 1844 work The Condition of the Working Class in England. For 10 points-name this writer who edited Das Kapital and collaborated on The Communist Manifesto with Karl Marx.

Answer: Friedrich Engels
20. Negotiated at the Wormley House hotel in Washington, it led to the appointment of Tennessee senator David Key as postmaster general. It also guaranteed the removal of Federal troops from Louisiana and South Carolina, a number of Cabinet posts for Southern Democrats, and "home rule" in the South, thus ending Reconstruction. For 10 points-name this compact that allowed Rutherford B. Hayes to assume the presidency, completed just three days before his inauguration.

Answer: Compromise of $\underline{1877}$ [accept reasonable equivalents]
21. This literary character's name has been taken by a Christmas tree farm in North Carolina and a California software company specializing in graph analysis programs. Far better-known uses of this character's image are as one of the members of the "League of Extraordinary Gentlemen," as well as the presence of "his" island at Disneyland. For ten points, name this Mark Twain creation, who never liked whitewashing fences all that much.

Answer: Tom Sawyer
22. Born in 1853, this physicist was one of the first to postulate the existence of electrons. He shared the Nobel Prize in Physics in 1902 with Pieter Zeeman, for his explanation of the Zeeman effect, a change in spectral lines in a magnetic field. He extended the hypothesis of G. F. Fitzgerald that the length of a body changes as its speed changes. For ten points, name this man, for whom the relativistic transformations are named.

Answer: Henry Lorentz
23. It is actually made up today of the Studio-Thé tre and the Thé tre du Vieux-Colombier as well as the better known Salle Richelieu. Originally occupying the Hotel Guénégaud, it was moved to a tennis court near the present Arc de Triomphe, a building near the Tuileries, and a building near the present Luxembourg gardens, before moving permanently in 1799 to the Royal Palace at Place Colette. For ten points name this French theater, formed in 1680 when Louis XIV joined the troupe of the Hotel de Bourgogne with the comedy troupe of MoliPre.

Answer: Comédie-Fran_aise (accept also "Thé_tre-Fran_ais")
24. His claims to fame include his own recording of "Ooby Dooby" and "Claudette," which he wrote for the Everly Brothers. Though he later performed with The Traveling Wilburys, and lent his song "In Dreams" to the movie Blue Velvet, he earned his spot in the Rock and Roll Hall of Fame with "Uptown" and "Only the Lonely." For 10 points-name this musician honored in the PBS special A Black and White Night, whose song provided the name for the movie Pretty Woman.

Answer: Roy Orbison

BONI - JOHNS HOPKINS
SWORD BOWL 2004 -- UT-CHATTANOOGA
Questions by Johns Hopkins A and B with a side order of Yale B, Princeton, Rochester, CWRU, and Ben Gross

1. Given a description, name the term from structural engineering, for ten points each.
[10] This is the term given to an applied force on an object which causes a deformation in that object.

## Answer: stress

[10] This value is given to the stress divided by the strain on an object, and is used in predicting the deformation resulting from a given stress.

Answer: Young's modulus
[10] This value is defined as the density of the object times the partial derivative of the pressure on the object with respect to the density; it gives the change in volume of a solid object under a given pressure.

Answer: bulk modulus
2. Name these related people and things from the period between the world wars, for ten points each.
[10] Italy's invasion of this country in 1935 brought international condemnation such as the U.S. restriction of oil shipments to Italy as a result.

Answer: Ethiopia
[10] Ethiopia's leader at the time was this man, considered to be divine by Rastafarians.
Answer: Haile Selassie,
[10] The inability of this international body-founded in 1919-to enforce any penalty on Italy for the invasion was a major example of the ineffectiveness that ultimately led to its downfall.

Answer: $\quad$ The League of Nations
3. Head, head, wherefore art thou, o head? 10 points each.
[10] In the final act of Macbeth, this character emerges bearing the tyrant's severed head.
Answer: Macduff
[10] In this play, the villainous buffoon Cloten is beheaded by Arviragus, one of the title king's sons. His wicked stepmother then goes berserk.

## Answer: Cymbeline

[10] To avoid the execution of Claudio, characters plot to execute someone else who resembles Claudio, and show Angelo the head as proof. Luckily, there's a convenient death, and they use that head instead in this "problem play."

Answer: $\quad$ Measure for Measure
4. 30-20-10, name the branch of psychology.
[30] The "psychograph" was invented in 1931 by Henry C. Lavery and Frank P. White as a means to test mental capacity based on this branch's theories.
[20] The origins of this branch are traced to the 1796 hypothesis of Franz Joseph Gall that the brain is compartmentalized into different sections responsible for different functions.
[10] Legend has it that Walt Whitman's brain was dropped by a labworker who was supposed to measure its size and shape in an attempt to prove the tenets of this now-acknowledged "pseudoscience."

Answer: phrenology
5. Speaking of Walt Whitman, identify these Whitman poems from clues for 10 points each.
[10] Featuring such poems as "Bivouac on a Mountain Side" and "Cavalry Crossing a Ford," this 1865 supplement to Leaves of Grass contains most of his Civil War poetry.
ANSWER: Drum-Taps
[10] Whitman also wrote a sequel to Drum-Taps, which included this elegy to Abraham Lincoln that claimed "The ship has weather'd every rack, the prize we sought is won."
ANSWER: "O Captain! My Captain!"
[10] Whitman's other famous elegy to Lincoln, it uses such metaphors as a star in the western sky and the song of a thrush to mourn his death.
ANSWER: "When Lilacs Last in the Dooryard Bloom'd"
6. 30-20-10, name the work of art.
[30] Commissioned by Bishop Odo de Conteville, it was secretly moved to the Louvre following the D-Day invasion,
but is now located in its original town.
[20] Currently at the Centre Guillaume in its namesake town, it was most likely dedicated on the same day as the town's cathedral. It covers an area of approximately 35 square meters.
[10] Constructed from eight separate pieces of linen and richly colorful wool thread, it describes the conquest of England by William, pictures Halley's Comet, and is actually embroidery.

Answer:
Bayeux Tapestry
7. Answer the following question about analytical chemistry, FTPE:
[10] What is the general name for the separations method that relies on differences in partitioning behavior between a flowing mobile phase and a stationary phase to separate components of a mixture?

Answer: Chromatography
[10] This method bombards a substance with an electron beam to fragment the molecule. The fragments are sorted via a magnetic field based on mass-to-charge ratio.

Answer: Mass Spectrometry
[10] A modification of mass spectrometry, this method uses an electric field instead of a magnetic field and sorts ions by temporal instead of spatial separation in the spectrometer reading.

Answer: Time of Flight Mass Spectrometry (or TOF-MS)
8. Answer the following about celebrities who have made appearances on the PBS show Arthur, for ten points each.
[10] Along with jazz saxophonist Joshua Redman, this classical cellist, who has collaborated with Bobby McFerrin, was invited to perform at the Elwood City Library's music series.

Answer: $\quad$ Yo-Yo Ma
[10] When this (recently-deceased) host of another PBS children's show stays at Arthur's house, Arthur wants to keep it a secret from his friends because he thinks they will call him a baby.

Answer: Fred Rogers
[10] When Francine doesn't win the Athlete of the Year award, this world-champion athlete, supposedly a graduate of Lakewood Elementary (in real-life she currently attends UCLA), teaches her about sportsmanship.

Answer: Michelle Kwan
9. Answer these related questions about Reconstruction, for ten points each.
[10] This government organization was founded in order to help educate former slaves and manage the captured land of Confederates, among other things.

Answer: $\quad$ The Freedmen's Bureau (also accept: Bureau of Refugees, Freedmen, and Abandoned
Lands)
[10] This man, a general in the Union army, was named the first commissioner of the Freedmen's Bureau in 1865. He was one of the founders of a historically black university in the District of Columbia named for him.

Answer: Oliver Otis Howard
[10] This phrase originated with Field Order \#15 from Gen. William Tecumseh Sherman, as an expression of the resources he believed each freedman ought to receive from the sale of plantation assets.

Answer: $\quad$ Forty Acres and a Mule
10. Answer the following somewhat related questions about Russian literature, for ten points each.
[10] This 1970 winner of the Nobel Prize in Literature wrote Cancer Ward and The Gulag Archipelago, the latter of which won him exile to West Germany, also in 1970.

Answer: Aleksandr Isayevich Solzhenitsyn
[10] Mikael Bulgakov completed this masterpiece just before his death in 1940, but it remained officially banned and unpublished until 1966, due to its criticism of the Soviet government.

Answer: $\quad$ The Master and Margarita
[10] This author of the poetry collection Sublime Malady and the novel Doktor Zhivago, this man won the 1958 Nobel Prize in Literature but was forced by his government to decline it.

## Answer: Boris Pasternak

11. C major is an easy key for writing symphonies. 10 points each.
[10] This final symphony by Mozart, K 551, was written in C, and named for its accredited "god-like perfection." ANSWER: Symphony No. $\underline{41}$ in C major, "Jupiter" [accept either]
[10] This Shostakovich symphony, first performed in 1942, became an anthem of Russian resilience during a major siege by the Germans.
ANSWER: Symphony No. $\underline{7}$ in C major, "Leningrad" [accept either]
[10] His last symphony, usually numbered as number nine, is nicknamed the "Great" symphony. ANSWER: Franz Peter Schubert
12. Answer the following questions from thermodynamics, for ten points each.
[10] This quantity is defined as the partial derivative of total energy with respect to the number of particles of one species, holding entropy, volume, and other species constant.

Answer: Chemical potential
[10] The chemical potential can also be defined as the partial derivative of this thermodynamic function with respect to the number of particles, holding temperature instead of volume constant.

Answer: Helmholtz free energy
[10] In chemical reactions, the relation between chemical potentials of the various species at equilibrium is given by this law, a statement of the rate of a chemical reaction.

## Answer: Law of Mass Action

13. Answer the following questions, which may or may not be related, for ten points each.
[10] This man is known for his work in Minimalism, including such paintings as Flag. He was also an artistic adviser for John Cage and Merce Cunningham's Dance Company.

Answer: Jasper Johns
[10] This delegate to the colonial Congress from Rhode Island was one of two men from that state to sign the Declaration of Independence. He also served as Chief Justice of the Rhode Island superior court.

Answer: Stephen Hopkins
[10] This team, founded in 1976, was represented in its sport's 2003 All-Star game by Vernon Wells, Roy Halladay, and Carlos Delgado.

Answer: Toronto Blue Jays (if you care and are unaware, the link is that our sports teams are the "Johns Hopkins Blue Jays")
14. Now it's time for everybody's favorite bonus about British oppression. Given a brief description, name the British Act imposed on colonial America, on a 5-5-10-10 basis.
[10] Two acts by this name referred to the commonly accepted practice of allowing soldiers to confiscate livestock, food, and buildings for military purposes, and are specifically addressed in the third amendment to the U.S.
Constitution.
Answer: The Quartering Acts
[10] This act of 1767 imposed duties on goods imported to the colonies. The act was named after the Chancellor of the Exchequer who proposed it.

Answer: Townshend Act
[10] This 1774 act reduced the territorial claims of Ohio river valley residents and authorized the maintenance of Roman Catholic institutions in the namesake colony.

Answer: $\quad$ The Quebec Act
15. Answer the following questions about diffusion, for ten points each.
[10] This scientist's relation for diffusion says that the time needed for an object to diffuse is proportional to the square of the distance divided by a constant.

Answer: Albert Einstein
[10] In 1828 this scientist published his observations on thermal motion, entitled, "A Brief Account of Microscopical Observations," in Philosophical Magazine.

Answer: Robert Brown
[10] Brown's observations in that article were made in the months of June, July, and August, 1827, with these particles.

Answer: pollen
16. When Barbara Walters asked this singer to define a certain word, her response was "beautiful, bountiful, and bouncy-full."
[10] Name this singer who appeared in Goldmember.
Answer: Beyoncé Knowles [accept either]
[10] Beyoncé is best known, before launching a solo career, as a member of this trio.
Answer: Destiny's Child
[10] For what word did Beyoncé give the above definition?
Answer: bootylicious
17. Answer the following questions about an element of genetics, for the stated number of points.
[5] This is defined as a set of structural genes that is controlled by an operator. The most well studied one is the lac one in E. coli.

Answer: operon
[15] The $A$ gene encodes a transacetylase whose function is not well known. However, 10 points for one and 15 for two, what enzymes do the other two lac genes, $Z$ and $Y$, respectively, encode?

Answer: $\quad$ beta-galactosidase (for $Z$ ); permease (for $Y$ ) (note: make sure they are paired correctly)
[10] The lac operon is under negative feedback control by a repressor. For ten points, what gene encodes the lac repressor?

Answer: $\quad \underline{\text { LacI }}$ (also accept: the " $I$ gene")
18. Given the fictional place, name the British work from which it comes, for ten points each, and five if you need the author.
[10] Brideshead Manor
[5] Evelyn Waugh
Answer: $\quad$ Brideshead Revisited
[10] Pemberley
[5] Jane Austen
Answer: $\quad$ Pride and Prejudice
[10] The "dome of pleasure" in Xanadu
[5] Samuel Taylor Coleridge
Answer: "Kubla Khan"
19. Identify these terms from Zen, FTPE
A. [10] A paradoxical riddle or puzzle used in Zen to shock the mind into awareness. Perhaps the most famous example has one consider the sound of one hand clapping.

Answer: koan
B. [10] This word derived from the Japanese for "understand", refers to enlightenment, the final goal of Zen practitioners. It was also featured in the title of a Jack Kerouac book.

Answer: $\quad$ satori (The book was Satori in Paris)
C. [10] This word refers to a period of intense meditation where zen practitioners meditate, eat, and work together for several days. Long meditation periods are only interrupted by short rest periods and occasional lectures from the roshi, the head of the monastery.

Answer: sesshin
20. Name these German chancellors, 10 points each.
[10] Born in 1930, this member of the Christian Democratic Party served as chancellor from 1982 to 1998, and presided over German reunification.
Answer: Helmut Michael Kohl
[10] This first post-war chancellor served from 1949 to 1963, when he was forced to resign over a scandal involving the arrest of journalists from the magazine Der Spiegel [SHPEE-gil].
Answer: Konrad Adenauer [AD-ih-NOW-er]
[10] Despite his past as a member of the Nazi party and work in their propaganda department, this man was elected in 1966 and served until 1969.
Answer: Kurt Georg Kiesinger
21. 30-20-10, name the phenomenon from physics.
[30] This phenomenon was first observed in mercury in 1911 by Heike Kamerlingh Onnes, who won the Nobel prize in Physics in 1913 as a result of his research.
[20] Though ultimately found lacking for complicated systems, the BCS theory accurately describes this property for elements and simple alloys at very low temperatures.
[10] The highest temperature at which this effect-essentially a lack of electrical resistance-has ever been observed is 138 Kelvin, in a thallium-based ceramic.

Answer: Superconductivity
22. 30-20-10, name the form of dance.
[30] The main instrument used in the music for this type of dance is the bandoneon, an accordian-like instrument.
[20] It originated in the late-nineteenth century, in primarily immigrant neighborhoods. Now, thanks to musicians such as Carlos Gardel, it has gained widespread popularity.
[10] This dance began in Buenos Aires, and is currently in a revival that started in the mid 1980s. Its name is believed to be derived from the Latin word meaning "to touch."

Answer: Tango
23. 30-20-10, name the uprising.
[30] Charlton Heston and Ava Gardner starred in the 1963 movie about this uprising.
[20] Begun as an anti-imperial revolt against the Ch'ing, it ultimately transformed into a nationalist anti-foreigner and anti-Christian movement aligned with the dowager empress.
[10] This Chinese uprising gained its popular name from the revolutionary group that led it, The Fists of Righteous Harmony.

Answer: $\quad$ The Boxer Rebellion
24. In December 2003, talks for establishing a constitution for the European Union folded.
[10] In what city was this summit held?
Answer: Brussels [or Bruxelles]
[10] The main sticking point was a proposal to scrap a 2000 voting system that would give-for 5 points each-which two nations almost as many votes as Germany, with just half the people?
Answer: $\quad$ Spain and Poland
[10] Britain's euro-sceptic press hailed what Polish prime minister for his role in the collapse of the talks? Answer: Leszek Miller

