Berkeley's WIT 7: Packet by Caltech (M. Swiatek, J. Meltzer, R. Mason, B. Vandebrake, with special guest author Chris Nolte!)

Tossups

1. The fifth book of the Twelve Minor Prophets, it is unique among prophetic books in that it contains no oracles. Its message contradicts that of Ezra and Nehemiah, using the conversion of the hated Assyrians to show that God is universal and not the sole property of Israel. For 10 points--name this book about the son of Amittai, a reluctant prophet who spent three days in a fish's belly.
    Answer: <u>Jonah</u>

2. He was originally named Kusnasosro but after several childhood illnesses his parents changed his name to something luckier. During World War II he was the chief collaborator with the Japanese invaders of his country. As Japan collapsed he declared his country's independence and successfully fought off Dutch attempts to re-impose colonial rule. For 10 points--name this first president of Indonesia, overthrown in 1965 by General Suharto.
    Answer: <u>Sukarno</u>

3. Transition-state theory shows that the numerical constants in this equation represent the atom collision frequency and the reaction's kinetic barrier. First noted experimentally by J.J. Hood, it describes processes like plasticity and diffusion, and predicts that a small temperature increase will produce a marked increase in the reaction rate constant. For 10 points--what is this equation named for a Nobel-Prize winning Swede?
    Answer: <u>Arrhenius</u> equation

4. A quartermaster in the Franco-Prussian war, this syphilitic bureaucrat's favourite activity was boating on the Seine with prostitutes. Flaubert said of him, "He's my disciple and I love him like a son," and interested him in the theme of "the humble truth," which is the subtitle for his novel, *A Woman's Life*. For 10 points--who wrote of war, water and women in stories such as "Fly," "Ball-of-Fat," and "The Necklace?"
    Answer: Guy de <u>Maupassant</u>

5. Founded in the early 13th century, its cultural landmarks include the Zwinger, a complex of baroque-style buildings surrounding a courtyard, and the Semper Opera House, where Wagner and Richard Strauss debuted operas. Formerly known as "Florence on the Elbe"--for 10 points--name this capital of the state of Saxony, which on February 13 and 14, 1945, was devastated by Allied bombers.
    Answer: <u>Dresden</u>

6. This traditional delicacy of the Egyptians and Romans was presented by J.P. Clause to Louis XVI in 1780, associating it forever with the cuisine of Strasbourg. The best consists of firm, smoothly textured whole lobes of a creamy white colour tinged with pink, and can be served with pancakes, in terrines, or around a truffle core. For ten points, give the French term for this fatty goose liver most often served in a pate (pa-TAY).
    Answer: *foie gras* (fwah GRAH -- accept gross mispronunciations!)
(prompt on "pate", or on "fatty liver" or "goose liver" before "French")

7. If healthy, it floats on water and crackles when squeezed; if diseased, it sinks. In addition to its usual functions, this organ aids the liver in the regulation of starches by storing glycogen, and removes fat from the bloodstream, which it stores in the alveolar cells. It is surrounded by a membrane called the pleura. For 10 points--name this lobed respiratory organ to which blood is supplied by the pulmonary artery.
    Answer: <u>lung</u>

8. When this notoriously frugal man was reluctantly persuaded to buy an executive jet, he christened the expensive plane "the Indefensible." But he must have liked it since he later bought the company, Gulfstream Aircraft. He likes eating at Dairy Queen, and now he owns that too. He is fond of Cherry Cokes, and owns eight percent of Coca-Cola through his holding company, Berkshire Hathaway. For 10 points--identify this investor, the second-wealthiest man in America.
    Answer: Warren <u>Buffett</u>

9. Consisting of 11 regiments of cavalry, 12 regiments of foot soldiers, and 1,000 dragoons, it was "new" because instead of being fragmented under many leaders, it was centralized under the command of Thomas Fairfax. For 10 points-- name this organization formed in February 1645, noted for its discipline, its success at Naseby against Charles I, and its cavalry commander, Oliver Cromwell.

Answer: the New Model Army

10. On Broadway, he directed big-name hits like *The Skin of Our Teeth, Death of a Salesman*, and *A Streetcar Named Desire*. His early motion picture credits include "A Tree Grows in Brooklyn" and "Pinky." For 10 points--name this Oscar-winning director of "Gentleman's Agreement" and "On the Waterfront," whose 1999 honorary Academy award met with mixed reactions due to his compliance with the House Un-American Activities Committee.

Answer: Elia Kazan or Elia Kazanjoglous

11. The Great Vowel Shift of medieval English involved the creation of these, as the "ee" sound was shifted to "eye" and "oo" shifted to "ow." In dieresis, one syllable is turned into two, often by breaking one of these into two pure vowels. For 10 points--identify this kind of gliding vowel which requires the vocal tract to make a continuous transition from one position to another.

Answer: diphthong

12. The most distant can be identified with color comparison techniques. The Lyman-alpha forest, caused by light absorption from intervening hydrogen clouds, causes them to have very different colors from stars. For 10 points--name these extremely luminous objects first discovered in 1963 by Maarten Schmidt, whose high redshifts indicate their great distance.

Answer: quasars or quasi-stellar objects or QSOs

13. Despite its 18th-century Scottish origins, it was adopted as the official philosophy of France from 1816 to 1870. Advanced by Scottish Realists like Thomas Reid, it was a reaction to the skepticism of David Hume. It held that to ordinary people, sensations are not merely abstract ideas but carry with them a belief in an external reality. For 10 points--identify this philosophy which shares its name with a 1775 pamphlet by Thomas Paine.

Answer: philosophy of common sense

14. According to *National Geographic*, those who perform this service command up to $50 an hour in Boston and New York. Since parasitic head lice have developed resistance to most conventional treatments, professionals now teach parents how to remove the eggs by hand. For 10 points--name this practice, a term which now more commonly refers to minute or unjustified criticism.

Answer: nitpicking (accept alternate forms of the word) [note: lice eggs are known as "nits."]

15. While stationed in the Bay of Naples, this Roman admiral noticed a large cloud over a nearby mountain. Curious, he sailed toward it, only to be asphyxiated by the sulphurous gas emitted by Vesuvius. For 10 points--name this man who tried "to give a general description of everything that is known to exist throughout the earth" in his ~Natural History,~ whose death was chronicled by his nephew, Pliny the Younger.

Answer: Pliny the Elder or Gaius Plinius Secundus

16. This term may be used to describe any non-orientable surface of genus two. Named after the man who proposed the *Erlanger* program, it may be constructed from a finite cylinder by matching up the opposite ends with the orientation of the two circles reversed, or by attaching two Möbius strips along their boundary circles. For 10 points--name this "bottle" which cannot be embedded in 3-dimensional space.

Answer: Klein bottle

17. This city between the San Sebastian and Matanzas rivers was plundered twice by Sir Francis Drake and beseiged by British general James Oglethorpe. A refuge for Loyalists during the American Revolution, during the Indian wars its Castillo de San Marcos, still the oldest standing fort in the U.S., served as a

prison for Seminoles, including Osceola. For 10 points--what Florida city did Pedro Menendez de Aviles name for a bishop of Hippo?

Answer: Saint Augustine

18. Wordsworth said of it: "The Poem of my Friend has indeed great defects... the principal person has no distinct character...as a human being who having been long under the control of supernatural impressions might be supposed himself to partake of something supernatural...." It ends with the lines "He prayeth best, who loveth best/All things both great and small." For 10 points--name this Samuel Taylor Coleridge poem featuring a dead albatross.

Answer: "The Rime of the Ancient Mariner"

19. By 1822 he had compiled an alphabet of twenty-six letters, but only twelve of these were correct or partly correct; the others turned out to be wrong. Expanding on the earlier work of Thomas Young, he was the first to deduce that some of the symbols were phonetic, some were ideographic, and some determinative. For 10 points--name this Grenoble professor, renowned as the father of Egyptology and the decipherer of the Rosetta Stone.

Answer: Jean-Francois Champollion

20. The work was inspired by *Die Beterin*, a Seume poem about a praying maiden transfigured with hope by angels. Its form breaks 18th century tradition; its first movement, which precedes a scherzo and a "presto agitato" finale, bears the unusual marking "quasi una fantasia." A critic, reminded of Lake Lucerne at night, gave--for 10 points--what nickname to Beethoven's Opus 27, No. 2, a sonata in C sharp minor?

Answer: *Moonlight Sonata*

21. His name is Gedhun Choekyi Nyima and he is currently the youngest political prisoner on Earth--he is ten years old and has been detained by the government in an unknown location since he was six. Divinatory tests using dice and dough balls confirm his holy status, but the Chinese have tried to discredit him by claiming that he drowned a dog, and have put forth an impostor to replace him. For 10 points-- name this reincarnated figure, the second-most-important spiritual leader of Tibet.

Answer: the Panchen Lama

22. The third-highest ranking official in Bordeaux under the Vichy government, he later became budget minister in the post-war government of France. His trial began in 1997 when Jean Pierre-Bloch reversed prior testimony and claimed that this man had not been a member of the Resistance. For 10 points--identify this man convicted of war crimes in October 1999, who is serving a 10-year sentence after attempting to flee to Switzerland.

Answer: Maurice Papon

23. Mildly addictive when taken in small quantities, it is severely addictive when imbibed in quantities above two grams daily per seventy kilos of body weight. A characteristic effect of addiction is the "Eyes of Ibad" where the whites and pupils of the eyes turn a deep blue. For 10 points--name this drug, priced as high as 620,000 solaris per decagram, the chief export of Arrakis in Frank Herbert's ~Dune.~

Answer: melange or spice

24. The interior of the room features a vase beside a column, and slender trees can be seen in the distance. Two handmaids in the background are removing and folding clothes from a chest, and a small dog sleeps on the bed at the feet of the central figure, whose paleness contrasts with the darkness of the wall behind her. For 10 points--name this 1538 Titian painting of a nude goddess.

Answer: *Venus of Urbino*

25. As head of the U.S. Navy's Depot of Charts and Instruments, he distributed logbooks to sea captains for the recording of information on winds and currents. The resulting data allowed him to map the Earth's major wind patterns, pioneering the field of hydrography. For 10 points--whose 1855 work *The Physical Geography of the Sea* is considered the first work of modern oceanography?

Answer: Matthew Fontaine Maury

Bonus Questions

1. Answer the following about the travels of Belisarius for 10 points each:
a) In 533, Justinian sent Belisarius to North Africa to smack down this Germanic group, who, on their way to Africa, had sacked Rome in 410.
    Answer: <u>Vandals</u>
b) Unsatisfied with North Africa, Justinian set his sights, and Belisarius' armies, on Spain. These barbarians, however, survived the onslaught and remained in power until 711, when the Moslems swept through the region.
    Answer: <u>Visigoths</u> (prompt on "goths")
c) The big prize for Justinian was Rome, and in 535 Belisarius was sent to smite these people, who had ruled Italy since 489. The ensuing 18 year long battle ensured the final destruction of the ancient Western Roman Empire.
    Answer: <u>Ostrogoths</u> (prompt on "goths")

2. Answer the following about Thomas Mann's *Death In Venice* for 10 points each:
a) In what city does the novella begin? Hint--it's not Venice!
    Answer: <u>Munich</u>
c) Whose death in Venice marks the end of *Death in Venice*?
    Answer: Gustav von <u>Aschenbach</u>
c) Although it's not the cause of Aschenbach's death, what disease, spread by "dreadful comma-bacilli," is spreading through Venice when he dies?
    Answer: Asian <u>cholera</u>

3. Answer the following about blackbodies for 10 points each:
a) According to the Stefan-Boltzmann law, the power radiated by a blackbody is proportional to what power of its temperature?
    Answer: <u>fourth</u> (4th)
b) In his Nobel Prize address, this physicist described his radiation law, which corrected that of Rayleigh and Jeans, as "an interpolation formula which resulted from a lucky guess."
    Answer: Max <u>Planck</u>
c) This law states that, as the temperature of a blackbody increases, the frequency at which the Planck radiation spectrum is a maximum increases.
    Answer: <u>Wien's</u> displacement law

4. How did the South expect to be independent when it couldn't even agree on a flag? Answer the following for 10 points each:
a) Give the self-explanatory nickname of the first incarnation of the Confederate flag, which had three horizontal stripes of red, white and red with a blue canton featuring a circle of seven stars.
    Answer: <u>Stars and Bars</u>
b) The flag design sported by the General Lee and pickup trucks everywhere is known as the Southern Cross and was designed by this general, who commanded the forces that bombarded Fort Sumter.
    Answer: P.G.T. <u>Beauregard</u>
c) Even though the United States flag looks nothing like the Southern Cross, Confederate soldiers still confused the two during battle. Some genius designed a new flag with the Southern Cross as a canton on a white field. Give the pristine nickname of this flag, which Union soldiers often mistook for a surrender flag.
    Answer: <u>Stainless Banner</u>
[Note: because the Union perpetually thought the Stainless-Banner-wielding South was surrendering, a red bar was eventually added on the right side of the flag--just two months before the South actually did surrender.]

5. Answer the following about America's most screwed up mountain town: *South Park*.
a) In the "Halloween Special" featuring Cartman's Evil Twin, Kenny is killed by Stan's demonic pet. What type of animal is that bastard?
    Answer: <u>fish</u>

b) The South Park gang and "Getting Gay With Kids" visit this locale to perform a benefit concert; in the end they find that it really sucks.

Answer: rain forest

c) In *South Park: Bigger, Longer, and Uncut*, he's the God-hating French revolutionary who's done in by guard dogs while trying to rescue Terrance and Philip from execution.

Answer: the Mole

6. If two adjacent lights flash on and off alternately, we perceive a single light moving back and forth. For 10 points each:

a) Identify this phenomenon, exploited by motion pictures.

Answer: phi phenomenon

b) The phi phenomenon was the subject of a 1912 paper said to have founded this psychological school, which, in the context of perception, held that the whole was greater than the sum of its parts.

Answer: gestalt

c) The author of the gestalt-founding paper was this Frankfurt scholar, whose colleagues, Wolfgang Kohler and Kurt Koffka, also studied the phi phenomenon.

Answer: Max Wertheimer

7. In Greek, it means "the state of having a good indwelling spirit, or genius." For 10 points each:

a) Name this ethical principle which makes happiness or personal well-being the chief good for man.

Answer: eudaemonism or eudaimonia

b) This philosopher answered the question "What is eudaimonia?" with "activity in accordance with virtue" or "contemplation" in his *Nichomachean Ethics*.

Answer: Aristotle

c) This Athenian lawmaker and poet, one of the Seven Wise Men of Greece, added a temporal dimension to eudaemonism, saying "Call no man happy until he is dead."

Answer: Solon

8. Identify these early microscopists for 10 points each:

a) This 17th century Italian was the first to describe red blood cells, the papillae of the tongue, and the inner layer of the skin, which is named for him.

Answer: Marcello Malphigi

b) This Dutch lensgrinder investigated protozoans, which he called animalcules, and won wide fame when he confirmed that seminal fluid contains spermatozoa.

Answer: Antoni van Leeuwenhoek

c) This countryman of Leeuwenhoek studied tadpoles, discovering valves in the lymphatic vessels which are named for him. His microscopic observations were published collectively as the *Bible of Nature* after his death in 1680.

Answer: Jan Swammerdam

9. A man's home is his castle -- that is, if he happens to be a powerful ruler. Given a castle and the year of its construction, identify the person who reigned at the time of its completion, for 10 points each:

a) El Escorial, 1563

Answer: Philip II of Spain

b) The Louvre, 1546

Answer: Francis I [Note: this was the second construction of the palace. The first incarnation was built c. 1200 by Philip Augustus.]

c) Buckingham Palace, 1761

Answer: George III of England

10. Answer the following for 10 points each:

a) Name the author of the novel *One Flew Over the Cuckoo's Nest*.

Answer: Ken Kesey

b) Ken Kesey considers his best book to be this other successful novel that he wrote two years after *One Flew Over the Cuckoo's Nest*.

Answer: *Sometimes a Great Notion*

c) After *Sometimes a Great Notion*, Kesey didn't write much but he did drive around the country on a psychedelically-painted school bus, taking LSD. Name the book that Tom Wolfe wrote about Kesey and his friends, the Merry Pranksters.
Answer: *The Electric Kool-Aid Acid Test*

11. Thinking of getting easy college credit for pottery and basket-weaving? Not at the Bauhaus! Identify these prestigious faculty who taught ball-breaking Bauhaus art courses for 10 points each:
a) Stained glass and painting were the specialties of this Swiss artist, known for bizarre drawings like "Twittering Machine."
Answer: Paul Klee (pron. 'clay')
b) This man was assigned the mural painting and colour theory courses, although his theoretical treatise *Point and Line to Plane* deals more with drawing fundamentals.
Answer: Wassily Kandinsky
c) This Hungarian, the architect of the Whitney Museum of American Art, taught interior design and invented those funky tubular metal chairs.
Answer: Marcel Lajos Breuer

12. A man, a plan, a canal, Panama! Okay, make that several men. Identify these Panama-canal related treaties for 15 points each:
a) This 1850 treaty gave England and the United States joint control over any canal constructed across the isthmus of Panama, and Britain gave up her territorial rights to Central America.
Answer: Clayton-Bulwer Treaty
b) This 1901 treaty between Britain and the U.S. abrogated the Clayton-Bulwer treaty and gave the U.S. complete control over the Panama Canal Zone, ceding all British interests.
Answer: Hay-Pauncefote Treaty

13. Identify these "autonomous communities" of Spain, none of which are the Basque region, for 10 points each:
a) The capital of this region of northeastern Spain is Barcelona. It is the richest and most highly industrialized part of Spain.
Answer: Catalonia or Catalunya
b) Also the name of Spain's 3rd largest city, this province in eastern Spain was a Moorish kingdom conquered and ruled by El Cid.
Answer: Valencia
c) The Arabic name of this southernmost region of Spain probably means "country of the Vandals." It originally referred to the entire Iberian peninsula, but later signified only the territory the Moors still held.
Answer: Andalusia

14. Identify these mathematical functions for 10 points each:
a) This function of n is the number of positive integers less than n that are relatively prime to n. For n equal to one, the function is defined to be one.
Answer: Euler's function or Euler phi function or Euler totient function
b) For x greater than one, this function is equal to one plus one half to the x plus one third to the x plus one fourth to the x and so on. It is defined by continuation for other values of x in the complex plane.
Answer: Riemann zeta function
c) It is often described as a function of x which is zero everywhere except at x equals zero, but whose integral over x is one. Technically this is not a legitimate function, but it can be considered a "functional" that acts on other functions.
Answer: Dirac's function or Dirac's delta or Dirac delta function

15. Because its change is equal to the work done by a reversible process carried out at constant temperature and volume, it is often symbolized by the letter A, from the German "arbeiten," or "work." For 10 points each:
a) Name this state function, also sometimes symbolized by the letter F.
Answer: Helmholtz free energy

b) Give the thermodynamic formula for the Helmholtz free energy of a system in terms of the system's internal energy U, entropy S, and temperature T.

Answer: $F = U - TS$ (F equals U minus T times S; accept equivalents)

c) In statistical mechanics, the Helmholtz free energy is defined as the negative logarithm of what quantity often labeled Z for "Zustandsummen," the "sum over states?"

Answer: partition function

16. He made his operatic debut in October 1999 with the Detroit Opera Company. For 10 points each:

a) Name this Tuscan tenor who was blinded at age 12 in a soccer accident.

Answer: Andrea Bocelli

b) Bocelli starred in six performances of this 1892 Massenet opera, based on a work by Goethe.

Answer: Werther (NOT The Sorrows of Young Werther!)

c) Bocelli's hit song, ~Con Te Partiro,~ was most notably featured in commercials for what expensive Las Vegas resort?

answer: Bellagio

17. Wonder why Caltech writes such great packets? Maybe there's something in the water. Answer the following about water treatment for 10 points each:

a) This process removes dissolved calcium and magnesium salts from water by adding chemicals which form insoluble precipitates, or by ion exchange.

Answer: water softening

b) This process involves spraying water into the air so that dissolved gases that cause bad tastes and odours are transferred from the water to the air. Reaction with the air's oxygen also removes iron and manganese.

Answer: aeration

c) This process, carried out by distillation or electrodialysis, separates fresh water from brackish water.

Answer: desalination

18. Answer the following about the Falkland Islands War for 10 points each:

a) This Argentine military ruler ordered the invasion of the Falklands in 1982, apparently to distract attention from domestic problems.

Answer: Lieutenant General Leopold Galtieri

b) One of the major events of the war was the sinking of this Argentine cruiser by the British.

Answer: the General Belgrano

c) This was the British nuclear submarine which sank the General Belgrano. It thus became the only nuclear submarine which has ever fired a weapon in anger.

Answer: HMS Conqueror

19. Identify the Representative who chairs each of the following House committees for 10 points each:

a) Budget

Answer: John R. Kasich (OH)

b) Appropriations

Answer: C.W. Bill Young (FL)

c) Ways and Means

Answer: Bill Archer (TX)

20. Identify these theories of inflation for 15 points each:

a) This theory holds that the level of prices is directly proportional to the supply of money and inversely proportional to the volume of production. It fell out of favor after World War I but was reintroduced in a refined form by the Chicago School.

Answer: the quantity theory

b) This theory holds that the prices of goods are determined by their costs, but the supply of money grows in response to demand. Workers demand higher wages, causing employers to raise prices, causing workers to demand higher wages in a "price-wage spiral."

Answer: the cost-push theory

21. It is a nine-line verse form consisting of eight lines of iambic pentameter and a ninth line of twelve syllables. For 10 points each:
a) Name this revolutionary stanza form, coined around 1600, whose rhyme scheme is ababbcbcc.
    Answer: Spenserian stanza
b) Spenser invented and used this stanza for what long allegorical poem?
    Answer: The Faerie Queene
c) Give the poetic term for the ninth line of the Spenserian stanza, which consists of six iambic feet divided into two half lines.
    Answer: alexandrine

22. Identify these decapitated talking heads for 10 points each:
a) After he was torn to pieces by the women of Thrace, his head floated to Lesbos, where it was placed in a shrine and continued to sing and make prophecies.
    Answer: Orpheus
b) The wisest of the Norse Aesir, he was sent to the Vanir as a hostage, but they decapitated him and sent back his head. Odin kept the head and consulted it for advice.
    Answer: Mimir
c) This gigantic Welsh deity had to live in a tent because he was too big to fit in a house. After he was mortally wounded, he told his followers to cut off his head, which stayed alive and provided them with advice and companionship for another 80 years.
    Answer: Bran

23. Adherents of this philosophy strive for a conscious, healthy lifestyle free of debt and material consumption. For 10 points each:
a) Give the two word phrase for this recent movement, taken from the title of a 1993 Duane Elgin book about living a life that is "outwardly simple and inwardly rich."
    Answer: voluntary simplicity
b) This Seattle teacher's book, The Circle of Simplicity, spawned voluntary simplicity support groups nationwide.
    Answer: Cecile Andrews
c) Written by Vicki Robin and Joe Dominguez, this popular 1993 book encourages individuals to "transform their relationship with money and achieve financial independence."
    Answer: Your Money or Your Life

24. In a recent Rolling Stone article, David Bowie commented, "My mother never let me forget [that I shared Elvis' birthday]. She was enthralled with the idea." Never mind that mothers always overestimate the talents of their children -- for 10 points each-- name these others with whom Bowie shares his January 8 birthday.
a) Bowie went on to comment that lately, he's "more of a sucker" for sharing a birthday with this current occupant of the Lucasian chair.
    Answer: Stephen W. _Hawking_
b) This German conductor, undoubtedly more talented than Bowie, continued to promote Wagner's music even after his wife, Liszt's daughter Cosima, left him to marry Wagner in 1870.
    Answer: Hans (Guido) Freiherr von _Bulow_
c) Bowie wrote "Moonage Daydream" 120 years after this friend of Dickens wrote The Moonstone.
    Answer: (William) Wilkie _Collins_

25. Answer the following about embryonic development for 10 points each:
a) According to biologist Lewis Wolpert, it is not birth, marriage, or death, but this moment, which is truly the most important time in your life. Identify this dramatic moment when the three primary germ layers began to separate and took form.
    Answer: gastrulation (have pity and accept gastrula if necessary)
b) Identify the hollow ball of cells which you were immediately before gastrulation.
    Answer: blastocyst (accept blastula)
c) The cells that would become your mesoderm moved into the space between your ectoderm and endoderm by passing through an elongated depression called what?
    Answer: primitive streak