

MIT's Beaver Bonspiel 5 - Oct. 24, 1998

Round 3

Packet by JHU Extra Point (Fong the Vorlon) and Amherst

TOSSUPS

Tossup 1

For Bingham plastics and dilatants, this quantity varies depending on the amount of shear stress, but it is constant for Newtonian fluids. Highly dependent on temperature, for water it ranges from 0.3 to 3 centipoise (Sen-ti-PWAHSE) between the freezing and boiling points. FTP, name this quantity, which describes the resistance of a fluid to deformation or flow.

Answer: _VISCOSITY_

Tossup 2

Born in 1846, he was described as tall and thin, with a domed forehead, sunken eyes and sloped shoulders. First introduced in 1893 in the "Final Problem", he was known to be associated with John Clay and Colonel Moran. FTP, name this ex-professor, who also appeared in the far future as a hologram that tried to take over the Enterprise, the arch-nemesis of Sherlock Holmes.

Answer: Professor Edward _MORIARTY_

Tossup 3

Before his ascension to the throne, he met defeat at the hands of the Welsh under Llywelyn ap Gryffydd (LEWN ap GROO-fid). Known for improving administrative efficiency, his amendment of English common law earned him the nickname, "the English Justinian." FTP, name this monarch, better known for subduing Wales, and later the Scots, after beating William Wallace at Falkirk.

Answer: _EDWARD I_ or _EDWARD LONGSHANKS_

Tossup 4

His theory of the universe as two interlocking cones, representing the objective and subjective, was outlined in "A Vision". According to this theory, history was cyclical, traveling along gyres through different phases. These ideas form the basis for many of his poems, including "Sailing to Byzantium" and "The Second Coming". FTP, name this poet, who also used Irish folk tales in his work.

Answer: William Butler _YEATS_

Tossup 5

After starting the year off in Boston, he was dealt on June 21 to the National League, where he split playing time with Wally Joyner at first base and Carlos Hernandez and Greg Myers behind the plate. Not known for his power, he has nonetheless victimized Tim Belcher, Scott Erickson, Mark Wohlers, Billy Wagner and Randy Johnson for post-season home runs, which either have tied the game or have given his team the lead. FTP, name this San Diego Padre, nicknamed "King", who has had a knack for hitting homers in the post-season.

Answer: Jim _LEYRITZ_

Tossup 6

In 1923, this author was arrested at a union rally, for trying to read the First Amendment. He won the 1943 Pulitzer Prize for Fiction, for 'Dragon's Teeth', part of the Lanny Budd series. He is better known, though, for his books exposing and attacking facets of American capitalist society, such as the 'The Metropolis' and 'King Coal'. FTP, name the author of the book that helped the passage of the nation's first pure food laws.

Answer: Upton _SINCLAIR_

Tossup 7

His father hoped that he would manage the family's mining and ranching interests, but he instead became "proprietor" of the San Francisco Examiner at the age of 23. Dabbling in politics, he was twice elected to the U.S. House of Representatives, but he failed in 1906 to become governor of New York State. FTP, name this man whose "eagle" was a familiar logo on many metropolitan newspapers, and whose estate, San Simeon, is a popular tourist attraction in California.

Answer: William Randolph _HEARST_ Sr.

Tossup 8

It is quite irregular in shape, five miles long and varying between 800 yards and two-and-a-half miles in width. It was administered from 1945 to 1968 by the U.S., before being returned to its previous owner. Its strategic location puts it 760 miles from Tokyo, and 700 miles north of Saipan. FTP, name this Japanese island, whose most prominent landmark is Mount Suribachi, the site of a famous American World War Two victory.

Answer: _IWO JIMA_

Tossup 9

He entered the Paris Conservatoire at the age of 14, and remained there for 16 years. Collette provided the libretto for his best known opera, 'The Child and the Enchantments', and he composed 'Daphnis et Chloe' (DAHf-nee ay CLO-ay) for the Ballet Russes (ROOSE). One of his best known works is the 'Pavane (pah-VAHN) for a Dead Princess'. FTP, name this composer, whose orchestral works include 'Rapsodie Espagnole (es-PAHN-yole)' and 'Bolero'.

Answer: Joseph Maurice _RAVEL_

Tossup 10

The appearance of a signal recognition peptide at a ribosome targets a translated protein to this organelle, which encloses an oxidating environment, allowing for the formation of cysteine bonds. Among the types of proteins sent here are transmembrane and secreted proteins, as well as those that need to be glycosylated in the Golgi apparatus. FTP, name this long, continuous organelle, which can appear 'rough', when dotted with ribosomes.

Answer: _E_ndoplasmic _R_eticulum

Tossup 11

A great medieval theologian, his book "Sic et Non" logically answered

yes or no questions in accordance with the teachings of the Church Fathers. He maintained that nothing should be accepted unless it could be proved, a doctrine which later was condemned. FTP, name this French cathedral school teacher, who is famous for his love affair with Heloise (hel-WAHZ).

Answer: Peter _ABELARD_

Tossup 12

This trio's first album, "Outlandos d'Amour (dah-MORE)", had problems getting radio airplay in the late '70s, but their next three albums propelled them to the top of the charts, with such songs as "Message in a Bottle" and "Walking on the Moon". Their most popular hit, however, was the number one song of 1983, and was later ripped off to eulogize the Notorious B.I.G. FTP, name this band, whose members included Andy Summers, Stewart Copeland, and Sting.

Answer: The _POLICE_

Tossup 13

The story is told in letters written by the heroine to her sister, Nettie, and consistently uses vernacular figures of speech and rhythms. It tells of the journey of Celie from slavery to freedom, aided mostly by other women, including her best friend, Shug Avery. FTP, name this 1982 novel, which won the American Book Award as well as the Pulitzer Prize, written by Alice Walker.

Answer: _THE COLOR PURPLE_

Tossup 14

It was founded in 1916 by Clara Zetkin, Franz Mehring, and others, and got its name from a series of illegal letters that the group distributed. It was an offshoot of the Social Democratic Party, and was opposed to German involvement in World War One. Shortly before it led a failed revolt in Berlin in January of 1919, it changed its name to the Communist Party of Germany. FTP, name this group, whose leaders, Karl Liebknecht and Rosa Luxemburg, were arrested and murdered.

Answer: _SPARTICISTS_
(accept Spartacus League or Spartakusbund)

Tossup 15

It can be found by taking the common log of the ratio of the intensity of light in a reference beam, compared to the intensity that is transmitted through a sample. A dimensionless number, it is commonly used as the dependent variable in UV-visible spectroscopic determinations. FTP, name this quantity, that can also be determined by taking the product of the concentration, path length and molar extinction coefficient, according to the Beer-Lambert Law.

Answer: _ABSORBANCE_

Tossup 16

In one legend, this nymph was loved by Pan who, furious at his affections not being returned, had some shepherds tear her to pieces. By another story, Hera became annoyed by her constant

babbling, and robbed her of her speech. The most popular version of her story is that of her unrequited love for Narcissus. FTP, name this nymph, who pined away until only her voice was left.

Answer: _ECHO_

Tossup 17

In 1977, this composer lost a bet to his brother, Julian, and had to write a piece of music for cello and rock band. This music was called _Variations_, and became the basis for part of "Song and Dance." This Englishman also composed a Requiem, in which his former wife Sarah Brightman was a featured soloist. One of his recent compositions is "By Jeeves," a musical. FTP, name the composer of Starlight Express, Jesus Christ Superstar, and Sunset Boulevard.

Answer: Andrew _LLOYD WEBBER_ (Prompt on Webber)

Tossup 18

This member of the Iris family can be seen in India, Spain, and Iran. The powder derived from it is claimed to have aphrodisiac properties, and is used in Ayurvedic (a-yur-VEH-dic) medicine to treat alcoholism. The Ebers Papyrus also mentions it as a way to cure kidney problems. FTP, name this yellow dye derived from the plant *Crocus sativus* (SAH-ti-Vus), a central ingredient of risotto alla Milanese (ri-SOH-Toh AHL-ah Mee-lah-NAY-Say), considered the most expensive spice in the world.

Answer: _SAFFRON_

Tossup 19

Born in 1922, this author is most often compared to Gabriel Garcia Marquez because his nineteen novels, four plays, and three volumes of poetry are rooted in recognizable settings, but tinged with magical elements. His first novel was "Country of Sin," in 1947, and his most famous novel is "The Stone Raft." FTP, name this Portuguese writer, the recently-named winner of the 1998 Nobel Prize in Literature.

Answer: Jose _SARAMAGO_

Tossup 20

Like Bill Clinton, he was a two term Democratic president who had avoided the military draft as a young man, and was accused of sexual misconduct during his first presidential campaign. He was the first president to have a child born in the White House, and the only one to have an implanted rubber jawbone, due to mouth cancer. FTP name this president, the only president to have served non-consecutive terms.

Answer: Grover _CLEVELAND_

Tossup 21

This scientist was at the ripe age of 39 when he developed an alternative system to matrix-based Quantum Mechanics. He believed that his wave-based system could eliminate the need for quantum jumps, and was also the author of "What is Life?", a book which tried to use quantum physics to explain the genetic structure. FTP name this thinker, who once wrote of a paradox involving quantum probability and the killing of a helpless cat.

Answer: Erwin _SCHRODINGER_

Tossup 22

He received a Grammy award for Lifetime Achievement in 1985 but died just 6 years later. He was director of the New York Philharmonic from 1958-1969 and introduced the popular children's series "The Young People's Concerts" to New York. FTP, name this conductor and composer born in Lawrence, Massachusetts and known for such works as "Candide" and the score of "West Side Story."

Answer: Leonard _BERNSTEIN_

BONI

Bonus 1

It is time to test your knowledge of Canadian Prime Ministers. Name the prime minister given clues for the stated number of points.

A. F5P, name Canada's current prime minister.

Answer: Jean _CHRETIEN_

B. FTP, name Canada's prime minister during WWII.

Answer: W.L. _MACKENZIE KING_

C. F15P, name the prime minister who was before Chretien and after Brian Mulroney, Canada's only female prime minister.

Answer: Kim _CAMPBELL_

Bonus 2

FTPE, identify these immunological terms.

A. This is a substance that can elicit an immune response and that can react specifically with the corresponding antibodies or T-cell receptors.

Answer: _ANTIGEN_

B. This is the chromosomal region containing genes that encode cell surface glycoproteins that regulate interactions among cells of the immune system.

Answer: _M_ajor _H_istocompatibility _C_complex

C. This cell matures in the thymus and is responsible for cell-mediated immunity as well as regulation and differentiation of other immunologically competent cells.

Answer: _T-LYMPHOCYTE_ or _T-CELL_

Bonus 3

For 10 points each, name the Nazi given his duties.

A. Official Architect.

Answer: Albert _SPEER_

B. Head of the Gestapo and the S.S.

Answer: Heinrich _HIMMLER_

C. Editor of "Der Stuermer", a violently anti-Semitic newspaper.

Answer: Julius _STREICHER_

Bonus 4

Answer the following questions about figures from Greek mythology who had interesting things done at their birth.

A. This hero was dipped by the ankle into the river Styx.

Answer: _ACHILLES_

B. He was cast into the sea in a chest with his mother by his grandfather, whom it was prophesied that he would kill. He would later fulfill the prophecy by accidentally killing Acrisius with a discus.

Answer: _PERSEUS_

C. The fates told his mother Althea, that his life would only last as long as that of a brand burning upon the hearth.

Answer: _MELEAGER_

Bonus 5

You've probably seen the movie, but believe it or not, they were once novels. FTP each, I'll read you the first line, and you identify the title of the book.

A. Dr. John Harvey Kellogg, inventor of the cornflake and peanut butter, not to mention caramel-cereal coffee, Bromose, Nuttolene and some seventy-five other gastronomically correct foods, paused to level his gaze on the heavysset women in front of him.

Answer: _THE ROAD TO WELLVILLE_

B. If you want to find Cherry Tree Lane all you have to do is ask a policeman at the crossroads.

Answer: _MARY POPPINS_

C. People do not give it credence that a fourteen-year-old girl could leave home and go off in the wintertime to avenge her father's blood but it did not seem so strange then, although I will say it did not happen every day.

Answer: _TRUE GRIT_

Bonus 6

Name the following novels by Robert Louis Stevenson from a description for the stated number of points.

A. (5) The classic tale of pirate adventure featuring Long John Silver.

Answer: _TREASURE ISLAND_

B. (10) This tale addresses the duality between good and evil in every man's soul.

Answer: Peter Paul RUEBENS

Answer: The Strange Case of DR. JEKYLL AND MR. HYDE

C. (15) A boy is purposely gotten rid of by his cruel father. This turns out to be a good for him in the end.

Answer: KIDNAPPED

Bonus 7

Mark McGwire suddenly became the toast of America after hitting 70 home runs and shattering Roger Maris' home run record. However, he had never been a stranger to baseball fans ever since he set a record for most home runs hit by a rookie, earning him his league's Rookie of the Year award. Answer the following questions about that feat FTPE.

A. In what year did he set that record?

Answer: 1987

B. Name the team with which he set the rookie record.

Answer: Oakland Athletics (Accept either, or also A's)

C. How many home runs did he hit in 1987. You get 5 points if you are within 5.

Answer: 49 (5 points from 44-54)

Bonus 8

Every trail has a beginning and an end. For ten points each -- given the beginning and the end, name the trail between them.

A. Springer Mountain, Georgia to Mt. Katahdin (Cah-TAH-din), Maine.

ANSWER: The APPALACHIAN Trail

B. San Antonio, Texas to Abilene, Kansas.

ANSWER: The CHISHOLM Trail

C. Independence, Missouri to Fort Vancouver.

ANSWER: The OREGON Trail

Bonus 9

30-20-10. Name the artist.

30. He was born near Cologne in 1577, the son of a Protestant emigre from Antwerp, he spent his childhood in Germany. At the age of 21, he was accorded the rank of master painter.

20. One of his early works, the "Raising of the Cross", is a panel more than 15 feet high. It shows the superhuman energy with which he attacked his mighty concepts and the influence of Titian, Michelangelo, and Raphael.

10. Some of his better known works include: "Fall of the Damned", "Garden of Love", and "Henry IV receiving the Portrait of Maria de Medici".

Bonus 10

Given a starting note and an interval, give the ending note for that interval F5P each. You will get 10 bonus points for all correct. Keep in mind that the note must follow the key that it starts in. Equivalent notes are not acceptable. For examples, if the answer is C, an answer of B sharp or D double flat is wrong.

A. C. Major seventh.

Answer: B

B. E flat. Minor second.

Answer: F FLAT

C. F. Diminished fifth.

Answer: C FLAT (one step down as there is no minor fifth)

D. D. Augmented third.

Answer: F SHARP

Bonus 11

For the stated number of points, name the lost city from clues.

A. (5) An Inca city discovered in 1911 on top of a mountain.

Answer: MACCHU PICCHU

B. (10) The location of El Castillo, the Pyramid of Quetzalcoatl.

Answer: CHICHEN ITZA

C. (15) Called "The Atlantis of the Desert" by Lawrence of Arabia, it has actually been found in Oman.

Answer: UBAR

Bonus 12

Name the following disputed areas given clues FTP each.

A. Claimed by Mauritania but occupied by Morocco.

Answer: WESTERN SAHARA

B. Occupied and claimed by India, its status is disputed by Pakistan.

Answer: JAMMU-KASHMIR (or JAMMU AND KASHMIR)

C. Part of the Comoros islands, it was the only one which voted to remain a French colony. It is claimed by Comoros.

Answer: MAYOTTE

Bonus 13

Name the city that hosted the following major sporting events in 1998 on a 5-10-15 basis.

A. (5) Winter Olympics

Answer: _NAGANO_, Japan

B. (10) World Cup Final Match

Answer: _ST. DENIS_, France

C. (15) Commonwealth Games

Answer: _KUALA LUMPUR_, Malaysia

Bonus 14

Name the alpha amino acid from a description for the stated number of points.

A. (5) It is the only achiral amino acid.

Answer: _GLYCINE_

B. (10) It is the only cyclic amino acid.

Answer: _PROLINE_

C. (5) It is the only amino acid capable of forming disulfide bonds.

Answer: _CYSTEINE_

D. (10) This amino acid contains an isopropyl side chain.

Answer: _VALINE_

Bonus 15

FTP each, identify each of the following creatures from their tell-tale scientific names.

A. A bird, *Didus ineptus*

Answer: _DODO_

B. A bird, *Apteryx australis*

Answer: _KIWI_

C. A nocturnal beetle, *Lampyridae*

Answer: _FIREFLY_

Bonus 16

Confucius say: answer these questions about Chinese Dynasties FTP each.

A. Prior to this dynasty, Confucianism was eclipsed by Taoism and Buddhism. Characterized by territorial expansion, and implementation of the civil service examination based on Confucian ideals, name the dynasty that lasted between AD 618-906.

Answer: _T'ANG_

B. This dynasty saw the development of neo-Confucianism, a metaphysical system that drew on the beliefs of Taoism and especially of Zen Buddhism. Name the dynasty that lasted between 960 and 1279.

Answer: _SUNG_

C. During this dynasty Confucianism stressed meditation and intuitive knowledge FTP name this dynasty the penultimate one during which the Mongols were expelled and the art of porcelain flourished.

Answer: _MING_

Bonus 17

With albums such as "Dark Side of the Moon" and "Wish You Were Here", Pink Floyd has become a legendary rock group. Answer these questions about them for the stated number of points.

A. F5P, what was the first album released by Pink Floyd?

Answer: _PIPER AT THE GATES OF DAWN_

B. F5P each, who were the original members of the band?

Answer: Syd _BARRET_, Roger _WATERS_, Rick _WRIGHT_, Nick _MASON_

C. The latest member of the group was originally hired to help with the guitar, as Syd Barrett was unable to play due to his drug addiction. After the band, dropped Syd, he became their regular guitarist. F5P, name him.

Answer: David _GILMOUR_

Bonus 18

Given the name of the Presidential Estate or Home, name the president FTP each.

A. Sherwood Forest.

Answer: John _TYLER_

B. Peacefield.

Answer: John _ADAMS_

C. Oak Hill

Answer: James _MONROE_

Bonus 19

Answer the following related questions about pH chemistry FTP each.

A. If the pKa of an acid is 4.0, and the pH of a solution of that acid at 25 deg C is 5.0, what is the ratio of the conjugate base to the acid?

Answer: _TEN_ to one

B. What is the name of the equation one would use to solve the

previous problem?

Answer: HENDERSON-HASSELBACH equation

C. If hydroxide ions were added to the above solution, only a small change in pH would occur (up to a point). What is this phenomenon called?

Answer: BUFFERING

Bonus 20

5-10-15. Answer these questions about this northern island country heated by geothermal energy.

A. First, F5P, within 50%, what is the population of Iceland?

Answer: 254,000 (accept 190,500 - 381,000)

B. FTP. In 1963, what new island formed south of Iceland due to volcanic eruptions?

Answer: SURTSEY

C. F15P. The group of Icelandic islands near Surtsey were named for Irish monks. Name the islands in Icelandic or English.

Answer: WESTMANN Islands or Vestmannaeyjar
(accept Vestmann)

BONUS 21

Name the year in history 30-20-10.

30. Harriet Tubman escapes from slavery and joins the Underground Railroad.

20. Marx and Engels publish Communist Manifesto.

10. The U.S.-Mexico war ends.

Answer: 1848