

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

ROUND 9

Packet by Harvard Be Pro-active (Joon Pahk)

TOSSUPS

TOSSUP 1

He has developed strong bipartisan ties, with allies such as state legislator Paul Sadler and Lieutenant Governor Bob Bullock. In fact, Bullock has even endorsed him rather than his opponent, Garry Mauro, despite the fact that Bullock is godfather to Mauro's daughter. He says he's only focusing on this year's gubernatorial election, but pundits think he'll make a run at the 2000 presidency. FTP, name this Texas governor.

ANSWER: GEORGE W. alker BUSH  
(prompt on "Bush" or "George Bush")

TOSSUP 2

Its curl is proportional to the current density, its divergence is always zero, and its time derivative is minus the curl of  $\mathbf{E}$ . It itself is the curl of the vector potential. Its strength due to a current source can be calculated using the Biot-Savart Law, and its effect on a charge using the Lorentz force law. FTP, identify this field, of which the Earth has a relatively weak one which points roughly north.

ANSWER: MAGNETIC field

TOSSUP 3

Unicron intercepted him after he had been jettisoned into deep space by a jealous rival in an obvious power play. Although he was nearly dead, Unicron revived him and gave him a new body in an exchange for a promise to destroy the Autobot Matrix of Leadership, thus creating Galvatron. He returned to kill the sniveling Starscream and retake control of the Decepticons. FTP, name this transformer who can turn into a gun.

ANSWER: MEGATRON (prompt on "Galvatron" on early buzz)

TOSSUP 4

His father designed the train station in Helsinki before emigrating to the U.S. and designing numerous buildings in the Midwest. The son would prove to be even more successful, with credits including a famous landmark in that region. FTP, name this Finnish architect who designed the TWA terminal at JFK airport, the Gateway Arch in St. Louis, and Dulles Airport.

ANSWER: EERO SAARINEN (prompt on "Saarinen"; do not accept "Elieel Saarinen")

TOSSUP 5

According to one legend, this deity was the mother of the eight-legged horse Sleipnir, because he took the form of a mare to seduce the horse of Blast. He was married to Sigyn, who faithfully kept his face from being burnt by poison, but his mate was the giantess Angrboda (an-ger-BOH-da), on whom he fathered Jormungand, Hel, and the

Fenris-Wolf. FTP, name this Norse god, most famous for tricking Hoder into killing Balder.

ANSWER: LOKI or LOKE

TOSSUP 6

He abolished feudalism and replaced it with a complex bureaucracy. He ordered the executions of almost 500 intellectuals who disagreed with this move, as well as the burnings of all books except those dealing with law, herbal medicine, and horticulture. His name can be translated as "first sovereign emperor," which is fitting since he united China in 221 BC. FTP, name this Ch'in emperor, who ordered the construction of the Great Wall.

ANSWER: Ch'in SHIH HUANG or SHIH HUANG-TI

TOSSUP 7

The title character of play by Joe Orton featuring Dr. Prentice. A man who returns to the good graces of the pharaoh, as predicted by a dream he has which is interpreted by Joseph. Stevens, the protagonist of Kazuo Ishiguro's The Remains of the Day. All of these men share an occupation which is also the surname of the author of "Erewhon" and "The Way of All Flesh." FTP, name this job, most notably served by Bertie Wooster's man, Jeeves.

ANSWER: BUTLER (accept "What the Butler Saw" on early buzz)

TOSSUP 8

A set  $X$  such that for any point  $P$  not in  $X$ , there exists a neighborhood of  $P$  which does not intersect  $X$ . A parameterized curve whose ending point coincides with its starting point. An interval on the real line which includes its endpoints. FTP, give the adjective that describes all of these objects, which also describes Massachusetts liquor stores on Sundays, and a door which is not ajar.

ANSWER: CLOSED

TOSSUP 9

He's not Emmitt Smith, but Barry Switzer called him "the greatest player that ever suited up." This was high praise, since Switzer coached Billy Sims, who won the Heisman the year after this athlete did. His career season came in 1980, when he rushed for 13 touchdowns and a stupendous 1,934 yards, then the second-best in NFL history. FTP, name this star running back of the Houston Oilers.

ANSWER: Earl CAMPBELL

TOSSUP 10

It ends with an ethereal and virtually themeless alternation of E minor and G-sharp minor chords, featuring wordless six-part harmony in women's voices. It begins with a pounding, insistent march which features a french horn solo and is written in a 5/4 time signature. There are seven movements rather than eight, because it was composed before Clyde Tombaugh earned his fame in 1930. FTP, name this astrological musical suite by Gustav Holst.

ANSWER: The PLANETS (accept NEPTUNE, The Mystic on early buzz)

## TOSSUP 11

A representative from New York from 1909 to 1911; another representative from 1969 to 1995 and the ranking Republican on the House Judiciary Committee starting in 1983; yet another representative from 1920 to 1945 and opponent of Franklin Roosevelt. All these men share the same name with, and are direct descendants of, a man who was governor of New York from 1849 to 1851. FTP, name this Secretary of State of Ulysses S. Grant.

ANSWER: Hamilton \_FISH\_

## TOSSUP 12

"A little learning is a dangerous thing; drink deep, or taste not the Pierian spring." "Good nature and good sense must ever join; to err is human, to forgive, divine." The above are famous quotes from a work which, despite its title, is not in prose, but rather a long poem written in heroic couplets. FTP, name this 1711 work, written by Alexander Pope before he turned 21, concerning literary style.

ANSWER: An \_ESSAY ON CRITICISM\_ (prompt on "Pope" on early buzz; do not accept "An Essay on Man")

## TOSSUP 13

The chromosomes shorten as synapsis aligns homologous pairs. Chiasmata (kee-oz-MAH-tah) form, and then the homologous chromosomes move to opposite poles. The cell divides, and then after a brief pause, the chromosomes condense again and kinetochores of the paired chromatids line up, and then the chromatids themselves separate. Finally, the cell divides for a second time in the conclusion to, FTP, what cellular division process?

ANSWER: \_MEIOSIS\_  
(accept "Prophase I" or "Meiosis I" on buzz which precedes "condense again")

## TOSSUP 14

He analyzed the notion of time, and his work "Time and Free Will" had a profound influence on Marcel Proust, whose cousin he married. He believed in direct intuition as a means of attaining knowledge and developed what has been called a "process philosophy," which is expounded in 1913's "Creative Evolution." FTP, name this French philosopher who was awarded the 1927 Nobel Prize in Literature.

ANSWER: Henri-Louis \_BERGSON\_

## TOSSUP 15

Their first album, "39/Smooth," contained the hit song "Disappearing Boy," as well as the track from which they got their name, which had previously been "Sweet Children." 1990's "Kerplunk" was more successful, and included "Two Thousand Light Years Away" and "Welcome to Paradise," which would re-appear on 1994's "Dookie." FTP, name this pop-punk group best known for such hits as "Hitchin' A Ride" and "Basket Case."

ANSWER: \_GREEN DAY\_

## TOSSUP 16

Despite having over 20 career titles, he has never won a tournament in the U.S. He won bronze medals in both singles and doubles at the 1992 Olympics, and starting that year, finished in the top ten five straight years. He set a tour record with an average of 15.4 aces per match in 1996, but has lost three times in the Wimbledon finals. FTP, name this hard-serving Croatian tennis star.

ANSWER: Goran \_IVANISEVIC\_

## TOSSUP 17

Although more than half the population is urban, agriculture, especially dairy farming, remains the chief industry. Its larger cities include Tartu and Parnu, and its largest minority ethnic group is the Finns. This is not surprising since it borders the Baltic Sea and the Gulf of Finland. FTP, name this northernmost of the Baltic republics, with capital at Tallinn.

ANSWER: \_ESTONIA\_

## TOSSUP 18

He wrote several "psychohistories" of figures such as Ghandi, George Bernard Shaw, and Luther, in which he analyzed the lives of these subjects with regard to a system of eight psychosocial stages that he had developed in his 1950 work "Childhood and Society." FTP, name this developmental psychologist who maintained that there was a crisis corresponding with each of these stages, and hence coined the term "identity crisis."

ANSWER: Erik \_ERIKSON\_

## TOSSUP 19

His "propagator" has the value  $i$  over  $p$ -squared minus  $m$ -squared plus  $i$  epsilon for a spin-zero particle. His "rules" give the external legs and vertex multipliers used in his diagrams, which are exceedingly handy for calculating reaction rates for particle decays and scattering. FTP, name this American physicist, whose work in quantum field theory and development of quantum electrodynamics earned him a Nobel Prize in 1965.

ANSWER: Richard Phillips \_FEYNMAN\_ (FINE-man)

## TOSSUP 20

He protects the sun-charge of Ra during its daily journey, but he is better known for darker deeds. During his eighty-year struggle with Horus, he lost his foreleg and testicles, while Horus lost his left eye. He is often depicted with a head of indeterminate animal origin, although some see in it an aardvark. FTP, name this Egyptian god of chaos and evil, who killed his brother Osiris and scattered his body parts throughout Egypt.

ANSWER: \_SET\_ or \_SETH\_ or \_SETI\_ or \_SETEKH\_ or \_SETESH\_

## TOSSUP 21

During a recent speech at Harvard University, he stressed the importance of globalization, although he urged that economic strength

could not be built without democratic strength. Prior to holding his current post, he was Under-Secretary-General for Peace-Keeping Operations. FTP, name this native of Ghana, the current Secretary-General of the United Nations.

ANSWER: Kofi \_ANNAN\_

TOSSUP 22

In his later life he unsuccessfully attempted to practice law; he was marked with eccentric behavior and delusions of persecution. His last public act was to offer a challenge to any player in the world at odds of a pawn and a move, but nobody accepted. Indeed, he was so good that Howard Staunton never agreed to play him, and Adolff Anderson probably wished he hadn't either. FTP, name this American chess master, who retired atop the world in 1859.

ANSWER: Paul \_MORPHY\_

BONI

BONUS 1

Identify the following literary characters FTP each.

A. This man and his brothers are the subject of a tetralogy of novels by Thomas Mann.

ANSWER: \_JOSEPH\_

B. He is a bank assessor who is arrested and questioned by an unknown legal authority, and then ruthlessly stabbed without explanation.

ANSWER: \_JOSEPH K\_, the protagonist of Kafka's \_The Trial\_

C. This games-master is the hero of a novel by Herman Hesse.

ANSWER: \_JOSEPH KNECHT\_ (prompt on partial answer)

(Note: The novel is \_Magister Ludi: The Glass-Bead Game\_.)

BONUS 2

Answer the following questions about the work of Albert Einstein for the stated number of points.

A. Einstein was a lowly patent clerk when he burst onto the international scientific scene with four brilliant papers in the span of a year. FTP if exact or five for within two, what year were these papers published?

ANSWER: \_1905\_ (accept 1903-1907 for five points)

B. It has been said that any one of these papers alone would have been worth a Nobel Prize: certainly the two involving special relativity, and he actually did win a 1921 Nobel for the paper explaining the photoelectric effect. But FTP, what was the subject of the fourth paper?

ANSWER: \_BROWNIAN MOTION\_

C. Einstein later led an unsuccessful crusade to refute quantum mechanics. In his most famous attempt, he devised a paradox involving

the spin alignments of oppositely-directed particles. For five points each, who were his two collaborators in this attempt?

ANSWER: Boris \_PODOLSKI\_ and Nathan \_ROSEN\_ (from the "EPR" Paradox)

BONUS 3

Identify the following about the events of the night of April 18, 1775, for the stated number of points.

A. First, for five points each, name the silversmith who gained his fame that night and the poet who immortalized him with a poem containing the line "One if by land, and two if by sea."

ANSWER: Paul \_REVERE\_ (silversmith) and Henry Wadsworth \_LONGFELLOW\_ (poet)

B. Paul Revere didn't actually make it to Concord, but fortunately for the rebels, others were also riding that night. FTP, name the man who rode through Cambridge, and whose ride is commemorated by a set of golden hoofprints on Cambridge Common.

ANSWER: William \_DAWES\_

C. Another rider met up with Revere and Dawes and fled when they were accosted by British troops. He escaped and actually got through all the way to Concord. For a final ten, name him.

ANSWER: Dr. Samuel \_PRESCOTT\_

BONUS 4

Identify the following about the hit TV show, "Buffy the Vampire Slayer," for the stated number of points.

A. For five, name the actress who plays Buffy.

ANSWER: Sarah-Michelle \_GELLAR\_

B. Buffy's main flame for Season Two was, unfortunately, a vampire, played by David Boreanaz (bor-ee-AH-naz). For five points, name him.

ANSWER: \_ANGEL\_ or \_ANGELUS\_

C. For five points each, name Buffy's two best pals, played by Nicholas Brendan and Alison Hannigan.

ANSWER: Alexander \_"XANDER"\_ Harris and \_WILLOW\_ Rosenberg

D. For a final ten points, name the man who created Buffy, and is a co-writer for both the series and the original movie.

ANSWER: Joss \_WHEDON\_ (WEE-don)

BONUS 5

Identify these poems by Robert Frost from quotes FTP each.

A. "Good fences make good neighbors."

ANSWER: \_MENDING WALL\_

B. "Home is the place where, when you have to go there, they have to

take you in." --"I should have called it something you somehow haven't to deserve."

ANSWER: The DEATH OF THE HIRED MAN

C. The land was ours before we were the land's.

ANSWER: The GIFT OUTRIGHT

(Note: this last was read at JFK's inauguration, after he began to read a poem he had written for the occasion, entitled, "For John F. Kennedy, His Inauguration: With Some Preliminary History In Rhyme." But the sun was in his eyes, and a cold wind almost tore the paper from his hands. So he abandoned it after a few lines and recited "The Gift Outright.")

#### BONUS 6

Time for a visual bonus! Answer the following questions about these two paintings for the stated number of points.

[Moderator: give team both pictures, and give them 10 seconds to look at them.]

A. FTP, what's the name of the guy on the left in painting A?

ANSWER: Giovanni ARNOLFINI

B. For five, who painted this happy couple?

ANSWER: JAN VAN EYCK (prompt on "van Eyck"; do not accept "Hubert van Eyck")

[If they answer "Johannes de eyck," accept it, but playfully accuse them of having read it off the inscription on the wall of the painting. :) ]

C. For five, who painted B?

ANSWER: Claude MONET

D. The bridge in the painting is located in a Paris suburb. For a final ten points, name it.

ANSWER: ARGENTEUIL (ar-zhan-TOY)

[Note: Monet spent most of the early 1870's at Argenteuil, before moving back to Paris and beginning his work on the Gare-St. Lazare.]

#### BONUS 7

Answer the following questions about chloroplasts FTP each.

A. Chloroplasts are notoriously difficult to isolate, so it wasn't until 1954 that they were first extracted intact. Daniel Arnon managed to isolate them from the leaves of what plant?

ANSWER: SPINACH

B. A chloroplast has three membranes: the outer, the inner, and this innermost membrane, on which the light reactions occur.

ANSWER: THYLAKOID membranes

C. The dark reactions of photosynthesis involve the anabolism of carbon-based molecules in the Calvin cycle. In what part of the chloroplast do the dark reactions take place?

ANSWER: STROMA

#### BONUS 8

The year 1498 was kind of an important one. Identify these people associated with it FTP each.

A. On May 20, this Portugese explorer pulled in to Calicut after becoming the first European to circumnavigate Africa.

ANSWER: Vasco DA GAMA

B. Just three days after Da Gama reached India, this man piously received absolution from Pope Alexander VI before being hanged and burned.

ANSWER: Girolamo SAVONAROLA

C. Speaking of burning, this man kicked the bucket on September 16, after spending the last four years being restrained by four assistants appointed by that same Pope.

ANSWER: Tomas de TORQUEMADA

#### BONUS 9

Given a year, identify that year's #1 NBA draft pick for the stated number of points.

A. 5: 1998

ANSWER: Michael OLWAKANDI

B. 5: 1992

ANSWER: Shaquille O'NEAL

C. 10: 1985

ANSWER: Patrick EWING

D. 10: 1990

ANSWER: Derrick COLEMAN

#### BONUS 10

Given a work of religious philosophy, identify its author for the stated number of points.

A. 5: City of God

ANSWER: St. AUGUSTINE of Hippo

B. 5: Summa theologica

ANSWER: St. Thomas AQUINAS

C. 10: Apologia pro vita sua

ANSWER: John Henry Cardinal NEWMAN

D. 10: Seven Storey Mountain

ANSWER: Thomas MERTON

BONUS 11

Identify the following related to mechanical rotation FTP each.

A. The second-rank tensor quantity whose eigenvectors give the three principal axes of rotation of a rigid body. It is also often given as a scalar in introductory texts, with a value equal to the eigenvalue for a given axis.

ANSWER: Moment of INERTIA tensor or INERTIAL moment tensor

B. The mathematician whose "angles" are the commonly-accepted way of parameterizing a rotation in three dimensions.

ANSWER: Leonhard EULER (pronounced "Oiler")

C. The physical quantity whose quantum-mechanical conservation arises because space is invariant under infinitesimal rotations.

ANSWER: ANGULAR MOMENTUM (do not accept or prompt on "momentum" or "linear momentum")

BONUS 12

Given a few titles of a musical work's movements, identify the work for ten points.

A. Morning Mood; In the Hall of the Mountain King

ANSWER: PEER GYNT Suites (Edvard Grieg)

B. Scene by the Brook; Storm

ANSWER: Ludwig van BEETHOVEN's SIXTH or PASTORAL Symphony in F major

C. The first part is a setting of the hymn "Veni Creator Spiritus"; the second depicts the redemption of Faust.

ANSWER: SYMPHONY OF A THOUSAND or Gustav MAHLER's EIGHTH Symphony in E-flat major

BONUS 13

Name the following people from the Odyssey FTP each. And no, none of them is Odysseus.

A. This daughter of Atlas hosted Odysseus for seven years on her island of Ogygia (oh-JIJ-ee-a), and bore him two sons.

ANSWER: CALYPSO

B. This race of giant cannibals, led by Antiphates, sank eleven of our hero's twelve ships, and ate the men.

ANSWER: LAESTRYGONIANS or LAESTRYGONES (less-tri-GOH-nees)

C. When Odysseus finally returns to Ithaca, the first man he seeks out

is this faithful swineherd, who helps him and re-unites him with Telemachus.

ANSWER: EUMAEUS (yoo-MAY-us)

BONUS 14

Identify these treaties and agreements from U.S. history for ten points each.

A. This 1819 treaty with Spain occurred in the aftermath of the First Seminole War and mandated the ceding of Florida to the United States.

ANSWER: ADAMS-ONIS Treaty or TRANSCONTINENTAL Treaty

B. In the wake of the War of 1812, this agreement provided for limitation of naval forces on the Great Lakes, and in some ways is also responsible for today's peaceful U.S.-Canada border.

ANSWER: RUSH-BAGOT Agreement

C. This was the name of two treaties, in 1900 and 1901, which revised the Clayton-Bulwar Treaty of 1850 and freed the U.S. from international control of the Panama Canal.

ANSWER: HAY-PAUNCEFOOT Treaty

BONUS 15

Identify these unrelated historical figures FTP each.

A. This defeated the Miami Indians under Little Turtle at the Battle of Fallen Timbers.

ANSWER: Mad Anthony WAYNE

B. This eccentric Bavarian King was an admirer and patron of Richard Wagner.

ANSWER: Mad King LUDWIG II or LOUIS II (prompt on "Ludwig" or "Louis")

C. This king of Spain who died in 1700 was the last of the Habsburg dynasty.

ANSWER: CHARLES II the Mad, or CARLOS EL HECHIZADO (prompt on "Charles" or "Carlos")

BONUS 16

Given the protagonist of a novel, name the novel for the stated number of points.

A. 5 pts: Captain Yossarian

ANSWER: CATCH-22 (by Joseph Heller)

B. 5 pts: Caroline Meeber

ANSWER: SISTER CARRIE (by Theodore Dreiser)

C. 10 pts: Billy Pilgrim

ANSWER: SLAUGHTERHOUSE-FIVE, or the Children's Crusade: A

Duty-Dance with Death (by Kurt Vonnegut, Jr.)

D) 10 pts: Dick Diver

ANSWER: TENDER IS THE NIGHT (by F. Scott Fitzgerald)

BONUS 17

Given a polyatomic ion and one of its constituent atoms, identify that atom's oxidation state FTP each. For example, if I said, "Carbon, in carbonate," you would say "four."

A. Sulfur, in sulfate

ANSWER: SIX or PLUS SIX

B. Manganese, in permanganate

ANSWER: SEVEN or PLUS SEVEN

C. Chlorine, in chlorate (NOT chlorITE)

ANSWER: FIVE or PLUS FIVE

BONUS 18

Name the current prime ministers (or premiers) of the following nations, FTP each.

A. France

ANSWER: Lionel JOSPIN (zhos-PAN)

B. India

ANSWER: Atal Bihari VAJPAYEE

C. Italy

ANSWER: Romano PRODI

BONUS 19

Identify the following from economics FTP each.

A. The curve whose slope is minus the marginal rate of substitution; it reflects the degree to which a consumer prefers one good over another.

ANSWER: INDIFFERENCE curve

B. The rate of unemployment at which inflation will neither increase nor decrease, according to Okun's law.

ANSWER: NAIRU or  
Non-Accelerating Inflationary Rate of Unemployment

C. The concept championed by David Ricardo, which states that nations should produce what they can produce cheapest, relative to other goods and to other nations.

ANSWER: COMPARATIVE ADVANTAGE

BONUS 20

Identify the album from lyrics, 30-20-10.

30) "Midnight, our sons and daughters were cut down and taken from us."

20) "She walks through the streets, with eyes painted red, under a black belly of cloud in the rain."

10) "My hands are tied, my body bruised; she got me with nothing to win, and nothing left to lose, and you give yourself away..."

ANSWER: The JOSHUA TREE by U2

BONUS 21

Name these books of the New Testament from quotes FTP each.

A. When Jesus arrived, he found that Lazarus had already been in the tomb for four days.

ANSWER: The Gospel according to JOHN (do not accept or prompt on 1 John, 2 John, or 3 John)

B. Although I am free in regard to all, I have made myself a slave to all so as to win over as many as possible... All this I do for the sake of the gospel, so that I too may have a share in it.

ANSWER: FIRST Letter of Paul to the CORINTHIANS  
(prompt on "Corinthians")

C. They threw him out of the city and began to stone him. The witnesses laid down their cloaks at the feet of a young man named Saul.

ANSWER: ACTS of the Apostles

BONUS 22

Answer the following questions about the recent embassy bombings for the stated number of points.

A. First, for five each, name the two nations where U.S. embassies were bombed on August 7.

ANSWER: KENYA and TANZANIA

B. FTP, name the Islamic extremist who is believed by U.S. officials to be have orchestrated the bombings.

ANSWER: Osama BIN LADEN

C. For a final ten, name the African capital where another such threat was averted by CIA officers on September 24. You will receive only five points if you need me to tell you the nation of which it is the capital.

[Moderator: read only if previous part answered incorrectly]

5 pts:Uganda

ANSWER: KAMPALA