

24 may 2001  
4/5/02  
6/19/03

## PENN BOWL 10

### A Buzzer Odyssey

Tossups by  
**WUSTL**

**11**

**1** They include ETAF, epidermal-cell-derived thymocyte-activating factor, and VEGF, vascular endothelial growth factor. Binding to cell receptors that initiate signal cascades, the genes they activate control proliferation and differentiation. Acting locally, unlike hormones--for 10 points--name this class of molecules that includes tumor necrosis factors, interferons, and interleukins, whose name sounds like they should make cells move.

ANSWER: cytokines [do not prompt on "hormone" or "growth factor"]

**2** At a performance of *Faust*, the protagonist announces his engagement. He promptly falls in love with his fiancée's cousin, who has just arrived in New York with a dubious reputation. But when May Welland insists on going through with the wedding, Countess Olenska returns to Europe, and Newland Archer is left behind. For 10 points--name this 1905 novel of New York society by Edith Wharton.

ANSWER: The Age of Innocence

**3** Also called "Public Law 93-148," Arthur Schlesinger, Jr. has stated that it made a "matter of usurpation" into "a matter of law." In 1981, 29 Congressmen sued Ronald Reagan for violating its terms. Newt Gingrich supported a failed repeal attempt in 1995 of--for 10 points--what 1973 act, whose veto by Nixon was overridden, that requires Congressional approval for extended military action?

ANSWER: War Powers Resolution or War Powers Act of 1973

**4** "It was never supposed to be a hit. It was supposed to be a Joe Morello drum solo," according to Paul Desmond. Containing memorable parts for piano and saxophone, it was the hit track on *Time Out* by the Dave Brubeck Quartet. For 10 points--name this jazz piece, written in the defiant time signature of 5/4 [five-four].

ANSWER: "Take Five"

**5** The Eastern section of this country, with just 30% of the landmass, holds 80% of the population. It has many rivers, the longest of which are the Rajang, Kinabatangan, and Pahang. Three-fifths of the population is indigenous, with one-quarter Chinese and 10% East Indian. For 10 points--name this Asian nation bordered by Thailand, Brunei, Singapore, and Indonesia.

ANSWER: Malaysia

**6** Completely conserved in the strong interaction, in the weak interaction, it can only change by plus or minus one unit. This forces particles with magnitude two for this quantity to have two-stage decays. Originally introduced to explain why certain particles decayed much slower than expected, it was later realized this number is related to the number of S and anti-S quarks in a hadron. For 10 points--name this weird quantity of quantum physics.

ANSWER: strangeness

**7** After reading avant-garde poems in a 1913 poetry journal, this Massachusetts socialite decided to use her social standing to promote the new movement. Her travels to England to meet F.S. Flint and D.H. Lawrence made this author of *Sword Blade and Poppy Seed* and *Pictures of the Floating World* more determined to make modern poetry more accessible to the public. For 10 points--name this Imagist poet who wrote "Patterns" and "Generations."

ANSWER: Amy Lowell

**8** After he was fired for passing marijuana around to a group of school children so they could know what it was, he married a hippie. On his honeymoon in India, he was abducted by the A-Team, and forced into rehab. Singing a song encouraging children not to swear--for 10 points--name this inept guidance counselor at South Park Elementary School.

ANSWER: Mr. Mackey

**9** He caught for three different teams during his 17 year career--10 of those after being shot in the eye in a hunting accident. After retiring, he became a broadcaster on ESPN's *Baseball Tonight*. His current job is managing a team that has missed the playoffs for the last seven years. For 10 points--name this man who next season will replace Jim Fregosi as manager of the Toronto Blue Jays.

ANSWER: Buck Martinez

**10** The Greek version of this school of thought is generally divided into three periods: Pyrronism, Academic, and post-Academic; its members included Arcesilaus and Cicero. Though not officially a school in more recent times, the name has been applied to such philosophers as David Hume. For 10 points--name this school whose name colloquially refers to the quality of taking nothing on faith.

ANSWER: Skepticism

**11** In humans, its development is controlled almost exclusively by paternal genes. Usually about seven inches in diameter and one inch thick, it ultimately weighs about a pound. The third stage of labor is marked by its expulsion--along with a lot of blood. For 10 points--name this structure attached to the umbilical cord which leeches maternal nutrients to feed the growing embryo and fetus.

ANSWER: placenta [HN: in a sense, the paternal genes don't "trust" the maternal genes to do the job]

**12** His gold medal-winning goal from 1994 is commemorated on a postage stamp in his home country. The sixth pick overall in the 1991 NHL entry draft, the Flyers traded him a year later to the Quebec Nordiques for Eric Lindros. Becoming one of the league's premier centers, he scored 22 points in his first 20 games this season. For 10 points--name this player, number 21 on the Colorado Avalanche.

ANSWER: Peter Forsberg

**13** In 211 BC, he was elected proconsul in Spain. Two years later, he conquered New Carthage and then most of Spain. He wanted to invade Africa but his jealous senatorial adversaries only allowed him to go as far as Sicily. In Sicily he raised a volunteer army and in 204 BC invaded Africa where he fought Carthage with his Numidian allies. For 10 points--name this Roman general who defeated Hannibal at Zama.

ANSWER: Scipio Africanus

**14** A typical electrophilic aromatic substitution, the electrophile is a carbocation [-cat-ion] created using aluminum or ferric chloride as a catalyst. Strongly deactivated systems such as nitrobenzene and phenyl ketones give poor results. For 10 points--named after its French and American discoverers, name this class of reactions in which benzene derivatives are alkylated.

ANSWER: Friedel-Crafts alkylation [do not accept "acylation"]

**15** Wise men, good men, wild men, and finally grave men, though "at their end know dark is right," all of them still refuse to quietly accept death. For 10 points--name this most famous villanelle, in which Dylan Thomas commands his dying father to "rage, rage against the dying of the light."

ANSWER: "Do Not Go Gentle Into That Good Night"

**16** While conditions improved after this country's 1980 independence, the Ndebele [n'DAY-bay-lay] majority resented the fact that a few white farmers owned almost half its agricultural resources. In 1999, the Ndebele began seizing white farms to force the government to enact land redistribution. For 10 points--name this African nation whose recent struggles have threatened the leadership of its president, Robert Mugabe [moo-GAH-bay].

ANSWER: Zimbabwe

**17** Full of unwashed socks, or a dead tomato squatched with moldy purple spots--that's his heart. And his soul is full of gunk and garlic. With spiders in his brain, and termites in his smile, he has all the tender sweetness of a seasick crocodile; no wonder he's been called a three-decker sauerkraut and toadstool sandwich with arsenic sauce. For 10 points--name this Dr. Seuss character mauled in a recent movie starring Jim Carrey.

ANSWER: The Grinch Who Stole Christmas

**18** This principle explains the Bohr effect in blood, and the carbonation of beverages. Useless where gases are highly soluble, the law nevertheless applies for other non-ideal solutions. Applicable whenever Raoult's law is applicable, this is what law--for 10 points--that states that when temperature is held constant, the mole fraction of a gas dissolved in a liquid is proportional to the pressure the gas exerts on the liquid?

ANSWER: Henry's law

**19** Written around 1470 while its author was in prison, it is based mostly on a series of complex French romances. Emphasizing the camaraderie of the knights and their conflicts of loyalty, rather than courtly love, it encompasses the decline of the entire fellowship rather than just the title event. For 10 points--name this work whose current title was given in 1485 by its publisher William Caxton, written by Sir Thomas Malory.

ANSWER: *Le Mort Darthur* or *The Death of Arthur*

**20** He solidified his position as a peacemaker through his role as advisor at the Washington Naval Conference, the Five-Power Conference, and the Versailles Treaty. The prime mover behind the Central American Court of Justice and the War College, he also negotiated the Alaskan boundary dispute and the Gentleman's Agreement. Winning the Nobel Peace Prize in 1912--for 10 points--name this Secretary of War for McKinley and Teddy Roosevelt.

ANSWER: Elihu Root

**21** The second movement, marked "Largo," was originally intended as part of an opera about Hiawatha. Its other three movements, marked "Adagio--Allegro molto," "Molto vivace," and "Allegro con fuoco," are much more lively. For 10 points--name this symphony composed in the United States by Antonín Dvořák.

ANSWER: *Symphony No. 9 in E minor, "From the New World"* [accept Dvorak's Ninth]

**22** Derived from the work of Rousseau, it holds that individuals have a true self, a core aspect of being untainted by external demands, often distorted into a false self. This can result from the actualizing tendency of human motivation. Psychologists should focus on differences between the true and false selves through empathy. For 10 points--name this approach to therapy that focuses not on probing but on listening to the patient.

ANSWER: client-centered therapy or person-centered therapy or the Rogers approach

**23** It ordered Catholics to make annual confession and to receive Communion during Easter, as well as ordering Jews and Saracens to wear distinctive clothing. Held under Pope Innocent III, it called for a new Crusade against Jerusalem, but more importantly established Transubstantiation as official Church doctrine. For 10 points--name this 1215 ecumenical council held in a Roman palace.

ANSWER: Fourth Lateran Council of Rome or Lateran IV

**24** This quantity, expressed as a complex number, is the inverse of admittance. Used in circuits driven by sinusoidal voltages, such as AC systems, it equals the resistance  $R$  plus  $i$  times the reactance,  $X$ . The reactance portion results from adding capacitors or inductors to the system. For 10 points--name this quantity, measured in ohms, and symbolized  $Z$ , which measures how much circuit elements obstruct the flow of current.

ANSWER: impedance [prompt on "Z"]

**25** The 2-3-4 type requires all nodes to have the same depth, and that each non-leaf has two, three, or four children. In the binary variety, each node has at most two children. A red-black one is a special form of binary search. A minimum spanning one for a given graph includes all a graph's vertices connected by a set of edges with the lowest possible weight. For 10 points--name this special type of connected graph that has no cycles.

ANSWER: tree

**26** This house came to power in a period of civil discord; it was named for a plant Count Geoffrey of Anjou liked to wear in his cap. The old line died when Henry I died and left the kingdom to his nephew Stephen. The power struggle between King Stephen and the Henry's daughter Matilda lasted until 1153, when Stephen recognized Matilda and Geoffrey's son, Henry II, as the new king. FTP, what royal English house did this establish?

ANSWER: Plantagenet

**27** His first short-story collection, *Beastly*, appeared in 1951, the same year he moved to Paris because of his dissatisfaction with Peron's government. Central themes in his works include the search for artistic perfection and the rejection of 20<sup>th</sup> century values, as seen in his anti-novel where the reader is invited to rearrange the different parts according to a prescribed plan. For 10 points--name this Argentinian author of *Hopscotch*.

ANSWER: Julio Cortázar

**28** Generally convex, this curve can be used to help firms choose the optimal amounts of inputs to produce a given amount of output. The point at which it is tangent to the isocost line is this optimal bundle. It is the producer's equivalent to the consumer's indifference curve. For 10 points--name this curve connecting all possible combinations of two inputs that produce the same output.

ANSWER: isoquant

**29** In April 1910, its leading members published the pamphlet *The Technical Manifesto of Painting*. Denouncing Rembrandt and Goya as unoriginal, it called for an end to all artistic forms of imitation while emphasizing "our whirling life of steel, of pride, of fever, and of speed." For 10 points--name this primarily Italian art movement of the 1910s and 20s whose members included Umberto Boccioni, Carlo Carrá, and Giacomo Balla.

ANSWER: Futurism or Futurismo

**30** The son of an itinerant Bedouin farmer, he graduated from his country's military academy in 1963. Named commander in chief of his country's armed forces in 1969, he was also named head of its governing body, the Revolutionary Command Council. Perhaps best known for sponsoring terrorism which led the US and Britain to bomb his residence in 1986--for 10 points--name this man who helped overthrow King Idris I of Libya.

ANSWER: Muammar al-Qaddafi or Muammar Khadafi or Moammar Gadhafi or Mu'ammarr al-Qadhafi

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**1** Name these French politicians for the stated number of points.

- [5] France's current president, his claim as heir to Charles de Gaulle has been tarnished by recent allegations of bribe taking while mayor of Paris.

ANSWER: Jacques Chirac

- [10] France's current Socialist prime minister, he expects to challenge Chirac in the next presidential election.

ANSWER: Lionel Jospin

- [15] Leader of the National Front, this man won almost 15% of the popular vote in the last presidential election on a platform that included a promise to deport all immigrants.

ANSWER: Jean Marie LePen

**2** Name the following from Egyptian mythology, 10 points each.

While the *ba*, or conscious soul, is eternal, the Egyptians saw this unconscious portion of the soul as being at grave risk, and that it could cease to exist altogether.

ANSWER: ka

Often portrayed as a falcon, he avenges his father Osiris's death.

ANSWER: Horus or Hor or Har

This sky goddess is the daughter of Shu and Tefnut.

ANSWER: Nut

**3** Given a shape from molecular geometry, name the hybrid orbital that forms that shape, 10 points each.

Trigonal planar

ANSWER: sp<sup>2</sup>

Trigonal bipyramidal

ANSWER: sp<sup>3</sup>d

Octahedral

ANSWER: sp<sup>3</sup>d<sup>2</sup>

**4** Given an international conflict, name the treaty that ended it, 10 points each.

Boer War

ANSWER: Peace of Vereeniging

Russo-Japanese War

ANSWER: Treaty of Portsmouth

Crimean War

ANSWER: Treaty of Paris

**5** Given the pro sports team, name the stadium in which that team plays, 10 points each.

New York Knicks

ANSWER: Madison Square Garden [prompt on "MSG"]

St. Louis Cardinals

ANSWER: Busch Stadium

Columbus Crew

ANSWER: Columbus Crew Stadium

**6** Name these Mexican artists, for the stated number of points.

[5] Perhaps the most famous Mexican muralist, the influences of post-modernism can be seen in works such as *The Fertile Earth*.

ANSWER: Diego **Rivera**

[10] Largely ignored during her lifetime, this mustachioed feminist artist has gained renown for works that portray her marriage to Rivera, such as *Diego and I*.

ANSWER: Frida **Kahlo**

[15] A self-trained artist, his works include murals at the Baker Library at Dartmouth College and *Modern Migration of the Spirit*.

ANSWER: Jose Clemente **Orozco**

**7** Name these works of Avian-American literature, 10 points each.

A wandering sportsman offers Sylvia ten dollars to lead him to the title bird's nest. Sylvia keeps its secret in this annoying Sarah Orne Jewett story.

ANSWER: "The **White Heron**"

This autobiographical 1969 work has been censored for explicit descriptions of Marguerite Johnson's rape.

ANSWER: ***I Know Why the Caged Bird Sings***

This Wallace Stevens poem describes the title bird in several short stanzas.

ANSWER: "**Thirteen Ways of Looking at a Blackbird**"

**8** Answer these questions about the Ebola virus, 10 points each.

Within 20%, how many proteins does the Ebola genome code for?

ANSWER: **6** to **8** [7]

This strain of the Ebola virus was discovered after an outbreak among monkeys in the US.

ANSWER: Ebola **Reston**

In 1996, an outbreak of Ebola occurred in what small village in Zaire, killing over 3/4 of those infected?

ANSWER: **Kikwit**

**9** Name these members of Hitler's cabinet, 10 points each.

Called "the doctor," this diminutive man with a club foot was a powerful speaker and propagandist. He became second in command shortly before Hitler's suicide.

ANSWER: Franz Joseph **Goebbels**

Hitler's foreign minister, he negotiated the non-aggression pact with the USSR, and was hanged after his conviction at Nuremberg.

ANSWER: Joachim von **Ribbentrop**

Officially Minister of the Interior, he is better known for his role as head of Germany's police forces, including the Gestapo.

ANSWER: Heinrich **Himmler**

**10** Given the number of a Mozart symphony, give the nickname, 10 points each.

*Symphony No. 41*

ANSWER: "**Jupiter**"

*Symphony No. 38*

ANSWER: "**Prague**"

*Symphony No. 35*

ANSWER: "**Haffner**"

**11** Name these economic models, 10 points each.

This microeconomic model assumes firms produce a standard product and must accept the market price of the goods they sell.

ANSWER: **Perfect competition**

This microeconomic model assumes that firms do not sell perfectly standardized products. It accounts for real world phenomena such as advertising.

ANSWER: **Monopolistic competition**

This macroeconomic model assumes a vertical aggregate supply curve, meaning that output does not change in the long run and supply creates its own demand.

ANSWER: **Classical** model

**12** Besides Portugal, six countries have Portugese as a national language. Five points each, name them. *You have 5 seconds to begin your answer.*

ANSWER: **Angola** \*   
**Brazil** \*   
**Cape Verde** \*   
**Guinea-Bissau** \*   
**Mozambique** \*   
**Sao Tome e Principe** \*

**13** Name these works by Friedrich von Schiller, for the stated number of points.

[5] This work presents the story of oppression in Switzerland.

ANSWER: **William Tell** or **Wilhelm Tell** [do not accept "Guglielmo Tell"]

[10] Like *William Tell*, this work also presents a story of oppression, but this time in Spain.

ANSWER: **Don Carlos**

[15] The focus of this 1800 work is more spiritual than in *William Tell* and in *Don Carlos*. It concerns the title character's joy of briefly being out of prison, and the ultimate liberation of her soul.

ANSWER: **Maria Stuart** or **Mary Stuart**

**14** Name these World War I battles in which US troops fought, 15 points each.

The first battle in which US troops fought independently, General Jack Pershing attacked and surrounded a German salient on southern flanks of the front on July 18.

ANSWER: Battle of **Saint-Mihiel** [mee-hee-EL]

The Battle of Saint-Mihiel led to this massive offensive on the Hindenburg Line, the war's last major battle. Over 1.2 million US troops participated in the campaign.

ANSWER: Meuse-**Argonne** Offensive

**15** 30-20-10. Name the musician from songs.

[30] "Cursum Perficio" [pare-FEE-see-o], "Pax Deorum" [day-OH-rum], "Tempus Verum"

[20] "Deora ar mo chroí" [dee-OR-uh ahr mo CREE], "Athair ar neamh" [EH-hair err namf]

[10] "Watermark," "The Memory of Trees," "Orinoco Flow"

ANSWER: **Enya**

**16** Name these defense mechanisms, 10 points each.

This unconscious mechanism keeps thoughts or memories that would be too threatening to acknowledge from one's awareness.

ANSWER: repression

A person turns an unacceptable impulse into its opposite, such as Jimmy Swaggert preaching against extramarital sex while seeing a prostitute.

ANSWER: reaction formation

In this conversion of sexual or aggressive impulses into socially acceptable activities, a boy may turn his competitive feelings for his brother into success in sports.

ANSWER: sublimation

**17** Name these Middle Eastern political figures, 10 points each.

A prominent military officer during the Six-Day War, he's been widely blamed for Israel's recent violent upsurge after his visit in September to the Dome of the Rock.

ANSWER: Ariel Sharon

This new President of Syria has been criticized for supposedly allowing members of Hamas to launch attacks that resulted in the death of a prominent Israeli field commander.

ANSWER: Bashar al-Assad

Though his country is not directly involved in Israel's recent fighting, this man as Iraq's foreign minister has seized this opportunity to denounce Israel and the U.S.

ANSWER: Tariq Assiz

**18** Ten points each, name these Sumerian deities.

This Sumerian storm god was born from the union of heaven and earth.

ANSWER: Enlil

Name Enlil's parents, heaven or earth.

ANSWER: An [heaven] or Ki [earth]

**19** Name these Kurt Vonnegut novels, 10 points each.

Perhaps the best-known of Vonnegut's novels, its protagonist has come "unstuck in time."

ANSWER: Slaughterhouse-Five, or the Children's Crusade

Dismissed by some critics as mere sci-fi, Vonnegut's second novel is the story of Winston Rumsfoord, who materializes on Earth for one-hour periods every 59 days.

ANSWER: The Sirens of Titan

Subtitled "Goodbye Blue Monday," this 1972 novel features the "fabulously wealthy" Pontiac dealer Dwayne Hoover and the ubiquitous Kilgore Trout.

ANSWER: Breakfast of Champions

**20** Name these computer geeks, 10 points each.

He created the Linux operating system.

ANSWER: Linus **Torvalds**

He created the Perl language.

ANSWER: Larry **Wall**

He invented the C++ programming language.

ANSWER: Bjarne **Stroustrup** [STROV-strup]

**21** When his mother asked to see Zeus as she was, she was incinerated by his true glory. 10 points each.

Name this character from Greek myth and his not-so-intelligent mother.

ANSWER: **Dionysius** and **Semele** [seh-MUH-lee]

Dionysius's cousin, he tried to stop a Bacchic festival. His mother Agave tore him to pieces.

ANSWER: **Pentheus**

**22** Answer the following from the early history of genetics, 10 points each.

[5] This Austrian monk first outlined the two laws of heredity, the law of segregation and the law of independent assortment.

ANSWER: Gregor Johann **Mendel**

[10] Derived from German, it is one member of a set of a pair or series of genes that occupy a specific position on a specific chromosome.

ANSWER: **allele**

[15] This Russian opposed Mendel's theories, believing acquired characteristics could be inherited. The Soviets integrated his ideas into agriculture with disastrous results.

ANSWER: Trofim Denisovich **Lysenko**

**23** Answer these questions about the world of Sherlock Holmes, 10 points each.

In what short story does Moriarty fall to his death at Reichenbach Falls?

ANSWER: "The **Final Problem**"

This group of street urchins was often employed by Holmes on odd jobs.

ANSWER: **Baker Street Irregulars**

Except for a brief stint by Mrs. Turner, she was Holmes' long-suffering housekeeper.

ANSWER: **Mrs. Hudson**

**24** 30-20-10. Name the city.

[30] Supposedly the Ark of the Covenant was brought here and placed in the Church of St. Mary of Zion.

[20] The Ark was supposedly brought there by Menilek I, the son of Solomon and the Queen of Sheba.

[10] Perhaps best known for its obelisks, this city of 20,000 is the center of Ethiopian Christianity.

ANSWER: **Aksum** or **Axum**

**25** Given the year and some musical numbers, name the Fred Astaire and Ginger Rogers films, 15 points each.

"Isn't It a Lovely Day," "The Piccolino," "Cheek to Cheek," 1935.

ANSWER: **Top Hat**

"Slap that Bass," "Let's Call the Whole Thing Off," "They Can't Take That Away From Me," 1937.

ANSWER: **Shall We Dance?**

**26** Given a particle state its quark composition, 10 points each.

proton

ANSWER: two up, one down

neutron

ANSWER: two down, one up

omega

ANSWER: three strange

**27** Name these abolitionists not named Garrison, Brown, or Douglass, 10 points each.

A Presbyterian minister, he published the influential abolitionist weekly, *The Alton Observer*. He died defending his presses from a lynching mob.

ANSWER: Elijah Lovejoy

A disciple of William Lloyd Garrison, he gained renown for a speech condemning the murder of Lovejoy. He was the 2<sup>nd</sup> president of the American Anti-Slavery Society.

ANSWER: Wendell Phillips

Also called "Isabella," this illiterate freed black woman in New York City fought for black emancipation and women's rights.

ANSWER: Sojourner Truth

**28** Name these literary terms, 10 points each.

This term refers to a substitution of one closely-related idea for another, such as "The orders came directly from the White House."

ANSWER: metonymy

This device is the use of a part to represent the whole or the whole to represent a part, such as asking for someone's hand in marriage.

ANSWER: synecdoche

This device substitutes a famous person's name for a quality associated with that person, such as "He's no Patrick Henry."

ANSWER: eponym

**29** Name these famous physics experiments, 10 points each.

It determined the charge on the electron.

ANSWER: Millikan oil-drop experiment

It attempted to detect the presence of the ether by measuring differences in the speed of light relative to the earth, but found nothing.

ANSWER: Michelson-Morley experiment

It proved the wave nature of light by showing how interference lines form when light is passed through two narrow slits.

ANSWER: Young's experiment

**30** Given the acronym of a UN-affiliated group, expand the acronym, 10 points each.

UNESCO ANSWER: United Nations Educational, Scientific and Cultural Organization

UNICEF ANSWER: United Nations Children's Fund

WIPO ANSWER: World Intellectual Property Organization