The Omar Bongo Academic Tournament
University of Pittsburgh: March 23, 2002

Questions by Mike Baker, Heather Brown, Mike Davies, Beth Davis, Amie Dupin, Jonathan Misurda, Rich Nalichowski, Josh Sokoloski, Jennifer Sydeski, and Matt Weiner

PACKET B TOSSUPS

1. They lie on the asymptotic giant branch of the Hertzsprung-Russell diagram. Hydrogen and helium in different shells create thermal pulses that bring heavier elements to their surfaces, causing variation over one to seven hundred days. FTP, name this class of variable stars which includes Mira variables.
ANSWER: **long period** variable stars

2. He collaborated with Toyoo Gyohten to write *Changing Fortunes: The World's Money and the Threat to American Leadership*. In 1999, he led the investigation into the behavior of Swiss banks during the Holocaust. In the early 1980s, he contracted the money supply in order to control inflation, but by the middle of the decade he had to adopt an expansionary policy in order to combat rising unemployment. FTP, name this chairman of the Federal Reserve Board of Governors from 1979 to 1987.
ANSWER: Paul **Volcker**

3. According to a tangential caption on a Reuters photo, "his government is being sued by his sister for cutting aid to single mothers, his brother was fired from his job cleaning sewers, and a cousin was exposed" as a former secret policeman. Edmund Stoiber will attempt to take his job in September 2002 elections, on the strength of opposition to this Social Democrat's bill loosening immigration laws. FTP, name this current Chancellor of Germany.
ANSWER: Gerhard **Schroeder**

4. This dynasty was toured and chronicled by the Chinese monk Faxian, who took great interest in its public hospital system. It established a marriage alliance with Lichchavi, eventually extending its control as far south as the Mahanandi and Narmada Rivers. Rulers from the capital at Patliputra included Kumara and Samudra. FTP, name this Indian dynasty, founded in 320 CE by the raja of Magadha.
ANSWER: **Gupta** dynasty

5. This disease appears in two forms: its "dry" form is associated with low caloric intake and affects the nervous system, while its "wet" form is associated with high levels of carbohydrate intake and leads to heart failure. It is prevalent in Southeast Asia due to the primacy of polished rice in the diet. FTP, name this disease caused by thiamine deficiency.
ANSWER: **beriberi**

6. The event which eventually led to this ruling was John E. Searle's attempt to purchase four companies. Chief Justice Fuller wrote that conspiring to increase manufacturing profit was distinct from conspiring to restrain interstate commerce and thus not subject to Congressional regulation. FTP, name this 1895 case which prevented application of the Sherman Antitrust Act to a Pennsylvania sugar refiner.
ANSWER: *United States v. **E.C. Knight** Company*

7. When they occur in rapid succession and influence each other, the "sandhi phenomenon" occurs. The two types are level, which does not change during a syllable, and contour, which does. Swahili and Korean once had them but no longer do. They have no significance in English. Thai has five, Mandarin has four, and Cantonese has nine. FTP, name these linguistic elements, the pitches at which words are spoken.
ANSWER: **tones**

8. Recorded in its entirety as one of harpsichordist Wanda Louise Landowska's signature pieces, it contains pieces in every key in an attempt to justify the new "equal" system based on semitones as opposed to the previously popular "mean-tone" arrangement. It is in two sets, each beginning in C and ending in B minor, and each consisting of twenty-four preludes and fugues for the keyboard. FTP, name this work of Johann Sebastian Bach.
ANSWER: The ***Well-tempered Clavier*** [or Das ***Wohltemperierte Klavier***]

9. It splits into the Nogat and the Martwa branches near the end of its course. The Bydgoszcz canal connects it to the Note_, while the Bromberg Canal links it to the Oder. Rising in the West Beskid range of the Carpathian Mountains, its tributaries include the Dunajec and the San, and it flows past Grudziadz, Plock, Toru_, and Kraków before emptying into the Gulf of Gda_sk. FTP, name this river which meets the Bug at Warsaw.
ANSWER: **Vistula** River [or **Wis_a**]

10. Francis Crick and Leslie Orgel argued that the scarcity of this substance on earth was evidence that life had come from another planet. It improves strength, weldability, melting point, and corrosion resistance when introduced into alloys, and it is coming into use as a less dense substitute for tungsten. Its pure form is used in the supports for light bulb filaments. Bombarding it with deuterons created technetium. FTP, name this metal, found in the active sites of enzymes in all nitrogen-fixing organisms.
ANSWER: **molybdenum**

11. The band named for it has recorded such songs as "Vowel Movements" and "Just Jenny." Introduced in 1974, the first line produced with this feature had an over-long insertion pin, destroying backwards compatibility. It also tended to cause discoloration, particularly on Mike Power. FTP, identify this three-word phrased used to advertise the softer, grasp-ready hands on Adventure Team GI Joe figures.
ANSWER: **kung fu grip**

12. Its cities include Menglad's home, Gastropnir, and the domain of Thiazi. Ruled by Thrym, its chief city is Utgard, although its most important sites may be the wisdom well of Mimir and one root of Yggdrasil. The river Iving separates it from the above world, Asgard, while it is lateral with Nidavellir and Svartalfheim. FTP, name this world, home of the giants in the Norse cosmology.
ANSWER: **Jotunheim**

13. Originally called Abegweit by the Micmac, it was renamed Île St. Jean, then renamed for the Duke of Kent. It is called the "Cradle of Confederation" because its capital hosted the Canadian Confederation conference in 1864. However, it did not join the confederation until 1873, as the seventh province. FTP, name this landmass, part of Acadia with Nova Scotia and New Brunswick, with capital at Charlottetown.
ANSWER: **Prince Edward Island**

14. First translated into English in 1655 by Richard Fanshawe, this ten-canto poem in ottava rima draws on the *Aeneid* in casting Venus as the protector deity. Bacchus is the divine adversary, despite the title of this work drawing on a legend about Bacchus's brother. It condemns the morality of colonial governors while telling of the voyages of Vasco de Gama. FTP, name this poem by Luis de Camões, the national epic of Portugal.
ANSWER: Os *Lusíadas* [or The *Lusiads*]

15. He published criticism such as *Poetry and the Age* and prose including *Pictures from an Institution* and *A Sad Heart at the Supermarket*. His peacetime poetry collections include *The Lost World* and *The Woman at the Washington Zoo*. FTP, name this poet who wrote of World War II in the collections *Little Friend, Little Friend* and *Losses* and the poem "The Death of the Ball Turret Gunner."
ANSWER: Randall **Jarrell**

16. It states that "The North American system only wants to consider the positive aspects of reality," and "Modern man likes to pretend that his thinking is wide-awake." It concludes that the Aztec idea of the gods sacrificing their bodies to create the world was blended with the Christian concept of God dying for man's sins, leading to a culture unafraid of death and defined by rebirth. FTP, identify this 1950 analysis of Mexican culture by Octavio Paz.
ANSWER: The **Labyrinth of Solitude** [or El *laberinto de la soledad*]

17. Originally called the Brigade, they formed in opposition to Clément Marot and the Rhétoriqueurs. Members included Jan Antoine de Baif, Etienne Jodelle, Pontus de Tyard, and Rémy Belleau, and all were instructed by Jean Dorat. The adopted as their manifesto "Defense and Illustration of the French Language" by Joachim Du Bellay, and their chief works included *Regrets* and *Sonnets for Helene*. FTP, name this literary circle led by Pierre de Ronsard, which shares its name with an open cluster.
ANSWER: the **Pleiad**es [or La **Pléiade**]

18. Its first two terms form the basis for Newton's recursive method for finding roots of equations. In the discretization of differential equations, it is used in order to simplify the problem into a system of linear equations. It also is used internally in calculators in lieu of a table for calculating sine and cosine. FTP, identify this infinite series expansion of a function around any point, known when centered around zero as the Maclauren series.
ANSWER: **Taylor** series [prompt on **Maclauren** series before it is mentioned]

19. The end of this work states that animals can reason and calls belief in miracles irrational. Its main argument begins by claiming that impressions create ideas through the laws of resemblance, contiguity, and cause and effect. Relations of ideas are axiomatic, while facts are empirical and thus unjustified, because induction is faulty. Because proving cause and effect is difficult, predetermined actions are a reflection of free will. FTP, name this expansion of the first book of *A Treatise of Human Nature* by David Hume.
ANSWER: *Enquiry Concerning Human Understanding*

20. Had the terms of the Treaty of Loewenwolde been followed, a Portuguese candidate would have been installed and this war avoided. The loser was given the dukedoms of Lorraine and Bar under the Treaty of Vienna. Spain, Sardinia, and France allied on one side of this conflict against Russia, the Hapsburgs, Prussia, and Austria. FTP, name this

1733 to 1735 war in which Augustus III won the contested throne over the claims of Stanislaw Leszczynski.
ANSWER: **War of the Polish Succession**

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PACKET B BONI

1. Name these Chinese authors from the last three hundred years for 10 points each.
•He died before completing *Honglou meng*, aka *The Dream of the Red Chamber*.
ANSWER: **Ts'ao** Hsueh-ch'in [or **Cao** Zhan; or **Cao** Xueqin]
•This prolific short-story writer of the twentieth century wrote "The True Story of Ah Q," *Call to Arms*, *Wandering*, and *Old Tales Retold*.
ANSWER: **Lu** Xun [or **Zhou** Shuren]
•He topped the U.S. bestseller lists in 1938 with *The Importance of Living*.
ANSWER: **Lin** Yutang

2. Name these pharaohs for 10 points each.
•He built the Great Pyramid at Giza and that's about it.
ANSWER: **Khufu** [or **Cheops**]
•After 120,000 workers died on a project to build a canal from the Nile to the Red Sea, he ordered the project abandoned on the advice of an oracle. His army fought Josiah of Judah at Meggido, and he also sponsored a circumnavigation of Africa and fended off Nebuchadnezzar.
ANSWER: **Necho II** [prompt on **Necho**]
•The half-brother of Hatshepsut, he fought the Syrians and extended his dominion as far the Mitanni lands on the other side of the Euphrates.
ANSWER: **Thutmose III** [prompt on **Thutmose**]

3. Name these Italo Calvino novels for 10 points each.
•His first novel, it follows the cobbler's apprentice Pin, who is dared to steal a Nazi's pistol.
ANSWER: The **Path to the Nest of Spiders** [or *Il **sentiero dei nidi di ragno***]
•The frame story consists of a man finding that a recently purchased novel has pages bound to each other. Returning to the bookshop, he encounters a woman with another book and discovers that the two texts contain the first chapters of ten different novels.
ANSWER: *If on a **winter's night a traveller*** [or *Se una notte d'inverno un viaggiatore*]
•In the form of a conversation between Marco Polo and Kublai Khan, this book condemns what it calls "the inferno of the living."
ANSWER: *Invisible Cities* [or *Le **cittá invisibili***]

4. Answer the following about restrictions on banks for 10 points each.
•Passed in 1933, it forbade banks from selling stocks, bonds, insurance, or real estate.
ANSWER: **Glass-Steagall** Act
•This component of the Glass-Steagall Act capped interest rates for deposits and outlawed the paying of interest on demand deposits.
ANSWER: Regulation **Q**
•This 1927 act prohibited nationally chartered banks from operating across state lines.
ANSWER: **Pepper-McFadden** Act

5. Name these types of waves produced by the brain for 15 points each.
•At less than six hertz, these waves mark the deepest stage of sleep.
ANSWER: **delta** waves
•With a frequency of thirteen to thirty hertz, these waves are produced by an alert or anxious person.
ANSWER: **beta** waves

6. Name these Carson McCullers works for 10 points each.
• Jake Blount, Mick Kelly, and Benedict Copeland expect their problems to be solved by John Singer, who is himself unstable, killing himself when Spiros Antonapoulos dies.
ANSWER: The **Heart is a Lonely Hunter**
•It contains a thematically attached short story, "The Twelve Mortal Men," about a chain gang. In the proper part of this novella, Marvin Macy and Lymon compete for the favors of Amelia Evans, eventually giving up and banding together to rob her.
ANSWER: The **Ballad of the Sad Café**
•This novel takes place on a Southern army base. In it, the bisexual Captain Penderton kills Private Williams and sees Leonora Penderton have an affair with Morris Langdon.
ANSWER: **Reflections in a Golden Eye**

7. Answer the following about a recent death for 10 points per part.
•On March 18, 2002, this 13-year-old hockey fan died as a result of being hit by a hockey puck two days earlier.
ANSWER: Brittanie **Cecil**
•The incident occurred at this team's home game against the Calgary Flames.
ANSWER: **Columbus** Blue Jackets [accept **Blue Jackets**]
•The puck was deflected off the stick of this Norwegian center, who holds the Blue Jackets record for points in a game with five.
ANSWER: Espen **Knutsen**

8. Name these V.S. Naipaul books for 10 points each.
•This collection of linked stories contains "One Out of Many," "Tell Me Who to Kill," and the title novella, set in a recently independent African country in the midst of civil war.
ANSWER: **In A Free State**
•A Muslim named Salim opens a shop at the title location in an unnamed Central African country. Despite the efforts of his friend Ferdinand, Salim realizes that the corrupt politics of the Big Man are destroying the country.
ANSWER: A **Bend In the River**
•An Indian immigrant to Trinidad named Mohun works as a sign painter and a journalist in an attempt to realize his only dream.
ANSWER: A **House for Mr. Biswas**

9. Answer the following about a war for 10 points per part.
•This 1675 to 1676 war between settlers and natives in Massachusetts began with a raid on Swansea.
ANSWER: **King Philip's** War
•Philip was chief of this tribe.
ANSWER: **Wampanoag**
•Philip was killed by a double agent working for this man. He later became the so-called "fierce messenger" who razed Beaubassin and otherwise harassed the Acadians. His grandson of the same name was a Revolutionary War doctor who spied for the English.
ANSWER: Benjamin **Church**

10. Name the following related things for 15 points each.
•This problem arises from the formula that attempted to describe the radiance of a blackbody at various frequencies of the electromagnetic spectrum, which was clearly wrong because of a prediction of infinite radiance at high frequencies.
ANSWER: **ultraviolet catastrophe**
•The ultraviolet catastrophe was averted by modeling light as finite packets, whose energies are directly proportional to frequency times this number
ANSWER: **Planck's** constant [prompt on **h**; accept **6.6**26 **times 10**$^{-34}$ **joule-seconds**]

11. State the meaning of the following operators in the given programming languages for 10 points each.
•The less then sign followed by the greater than sign in BASIC
ANSWER: **not equals** [or **inequality**]
•The caret in C and C++
ANSWER: **bitwise exclusive or** [or **XOR**]
•A backslash or a forward slash in Matlab
ANSWER: **solve system of** linear **equations** through Gaussian elimination [accept equivalents]

12. Name these French artists for 10 points each.
•This naval architect's paintings include *Paris, A Rainy Day* and *The Floor Strippers*.
ANSWER: Gustave **Caillebotte**
•Caillebotte's works were dubbed "filth" by this painter of *Cockfight* and *Thumbs Down*, the latter of which inspired *Gladiator*.
ANSWER: Jean Léon **Gérôme**
•Gérôme was taught by this painter of *The Little Princes in the Tower* and *The Execution of Lady Jane Grey*.
ANSWER: Paul **Delaroche**

13. Answer the following about Mongolian geography for 10 points each.
•Containing the Monastery of the Living Buddha, this capital city's name means "Red Hero."
ANSWER: **Ulaanbaatar**
•This member republic of Russia borders Mongolia to the north. Independent from 1918 to 1921, it has its capital at Kyzyl.
ANSWER: **Tyva** [or **Tuva**]
•Centered at Hohhot, Inner Mongolia was the first of this type of territorial division in Communist China. Others include Guangxi and Xinjiang.
ANSWER: **autonomous region** [or ***zizhiqu***]

14. Answer the following about the Roman navy under Augustus for 10 points per part.
•Antony and Cleopatra's forces were defeated here in 31 BCE.
ANSWER: **Actium**
•This longtime naval commander led the Romans at Actium and invented the harpago.
ANSWER: Marcus Vipsanius **Agrippa**
•Earlier, Agrippa won the battles of Mylae and Naulochus against this former governor of Sicily and Sardinia.
ANSWER: Sextus **Pompeius**

15. Name these related religious texts for 10 points each.

•Guided by Moroni, Joseph Smith is held to have found this text engraved on buried golden plates. It discusses the Israelite emigrants under Lehi who arrived in the Americas in 600 BCE.
ANSWER: **Book of Mormon**
•A collection of speeches and documents by Joseph Smith, it contains the Book of Commandments and the scriptural account of Smith's enlightenment. It was expanded with new divine revelations as recently as 1979.
ANSWER: **Doctrine and Covenants**
•Compiled by Franklin Richards, this collection of documents published during Smith's life includes the Book of Abraham and the history of the church written by Smith. It is named for a phrase in Matthew 13.
ANSWER: The **Pearl of Great Price**

16. Answer the following about hemoglobin for 10 points per part.
•This is the iron-containing prosthetic group found in hemoglobin.
ANSWER: **heme**
•Hemoglobin exhibits this property when an oxygen molecule enters an active site and causes a conformational change that favors subsequent oxygens binding to the three other active sites.
ANSWER: **cooperativity** [or **homotropic allostery**]
•This molecule binds to and stabilizes deoxygenated hemoglobin, decreasing affinity for oxygen.
ANSWER: D-**2-3-bis-phosphoglyceric acid** [or D-**2,3-bisphosphoglycerate**; prompt on partial answer]

17. Name these entities involved in Italian independence for 10 points each.
•From the Italian for "charcoal burners," this secret society led uprisings in Spain, Piedmont, and its native Naples in the 1820s.
ANSWER: **Carbonari**
•This group was founded in Marseilles in 1831 as a counterpart to France's *Charbonnerie Démocratique*. Its chief aim was to free Genoa from the Kingdom of Sardinia.
ANSWER: **Young Italy** [or *Giovine Italia*]
•This founder of Young Italy headed the Roman Republic established in 1848, opposed the creation of the Kingdom of Italy, and attempted to spread republican ideas throughout the continent via Young Europe.
ANSWER: Giuseppe **Mazzini**

18. Name these jazz saxophonists for 10 points each.
•The inventor of harmelodics, he combined atonality with jazz in *The Shape of Jazz to Come* and *Change of the Century*.
ANSWER: Ornette **Coleman**
•Often working with Count Basie and Billie Holiday, he created the nickname "Lady Day" for the latter. A major proponent of "cool" jazz, his albums include *The President Plays* and *In A Mellow Tone*.
ANSWER: Lester "Prez" **Young**
•This alto sax player popularized bebop before dying of a heroin overdose in 1955.
ANSWER: Charles "Yardbird" **Parker**

19. Given a pair of people, name the state from which they are both seeking election or re-election to the U.S. Senate in 2002 for 10 points each.

•Tom Harkin and Greg Ganske
ANSWER: **Iowa**
•Max Baucus and Mike Taylor
ANSWER: **Montana**
•John Cooksey and Mary Landrieu
ANSWER: **Louisiana**

20. Given a fundamental field particle, name the interaction which it governs for 15 points each.
•Photon
ANSWER: **electromagnetism**
•Gluon
ANSWER: **strong** nuclear force