## Tossups:

Oil droplets are introduced into a chamber by an atomizer, some becomming charged positively or negatively. In the chamber the drop is acted on by the gravitational force, and if the drop is moving, a viscous drag force. This is the procedure in what expirament, first performed in 1913?

## MILLIKAN OIL DROP EXPIRIMENT

She was born in St. Petersburg in 1905. Her first work was a popular mystery drama, The Night of January 16th. she saw altruism as both a personal and political weakness, and originated a philosophy known as objectivism. For 10 points, name this author of Anthem, We the Living, Atlas Shrugged, The Fountainhead.

Ayn RAND
The name's the same: The President of Weimar Germany when Adolf Hitler became Chancellor in 1933 and the hydrogen airship that exploded in flames at its mooring in Lakehurst, New Jersey, on May 6 1937. For 10 points, give this shared name.

HINDENBURG (Paul von H . and the H .)
This british film was based on a nevel by Pierre Boulle. It won 6 academy awards, and supporting actor Sessue Hayakawa was also nominated for an Oscar. For 10 points, name this World War II epic, named the best picture of the year in 1957.

The Bridge On the River Kwai
Japan's recent parliamentary elections saw the end of an era of one-party domination. For 10 points, what party, headed by Kiichi Miyazawa was swept out of office by a coalition led by Moruhiro Hosokawa.

Liberal Democratic Party (prompt if LDP" is given)

Bob experienced temporary paralysis after eating clams contaminated with a toxin produced by the dinoflagellate (dy-no-FLAJ-ell-ate) Gymnodinium breve (Jim-no-DIN-ee-um Breev). For 10 points, what is the common name of the coastline phenomenon that was responsible for making Bob sick?

## RED TIDE

Sixteen senators must sign a petition requesting it. If, after two days have elapsed, three-fifths of the senate vote in favor, it is invoked. After it is invoked, each senator may speak for a maximum of one hour on a bill before a vote is taken. For 10 points, what is this process used to end a filibuster?

CLOTURE
The 1993 Major League Baseball season saw any number of teams
spending truly obscene sums of money on free agents in the quest for a World Series title. One team took the opposite approach, however, dumping a slew of high-priced veterans and replacing them with rookies. For 10 points, name this National League West team.

San Diego PADRES (prompt if just
San Diego is given.)
The Newbery Award is given to the childrens' book with the best text. But what other award, for 10 points, is given to the childrens' book with the best illustrations?

CALDECOTT Award
Some of its more distinguished members included Andrew Mellon, Charles Evans Hughes, and Herbert Hoover. Some of its less distinguished members included Edwin Denby and Albert Fall. For 10 points, this was the Cabinet of which 20th Century President.

Warren G. HARDING
Small songbirds such as snow buntings are often seen eating small pebbles. These pebbles collect, for 10 points, in what organ where they are used to help digest coarse foods?

GIZZARD
This autumn holiday is the Hindu festival of light, celebrated to commemorate the return of Rama from exile. For Sikhs, it commemorates the return of the sixth Guru from prison. For 10 points, What is the name of this holiday?

DIVALI (or DIWALI or DEEPAWALI)
In his tapestry cartoons, executed between 1775 and and 1792, he rejected the customary mythological scenes, adopting instead the genre subjects that Jean Henore Fragonard was establishing in France. He depicted the open air amusements attended by Madrid's upper classes, who often appeared as majos and majas. In 1786, he was appointed as court painter to Charles III. For 10 points, name this artist of the monumental work The Third of May, 1808.

Francisco de GOYA
When asked if his studies of natural history had taught him anything about the nature of God, he supposedly answered that God "had an inordinate fondness for beetles". For 10 points, name this British biologist who died in 1964, and was the author of Possible Worlds and the essay collection On Being The Right Size.
J.B.S. HALDANE
(John Burdon Sanderson)
This principle was created by the Reciprocal Trade Agreements Act of 1934. Under it, when the United States lowers tariffs with one trading partner, the reduction applies to all partners with this status. For 10 points, what is this trade status that recently was the subject of controversy with regard to China.

MOST FAVORED NATION

Pierre Fermat and Guido Grandi first studied the curve called a "versoria", which is latin for a certain kind of nautical rope. But this curve bears the name of the mathematician who included it in her Analytical Institutions. Unfortunately, when translated to English, "versoria" became "versiera", meaning "female goblin". Name this mathematician for 10 points.

## Maria AGNESI

He's not a college professor, but this man has written a series of essays on such issues as nuclear proliferation and the war in Bosnia, that have been published in several scholarly journals. For 10 points, name this conservative columnist and author of such popular novels as Without Remorse and The Sum of All Fears.

## Tom CLANCY

He has been called the most prolific mathematician in history. His 866 books and articles represent about one third of the entire body of research on mathematics, theoretical physics, and engineering mechanics published between 1726 and 1800. He was a pioneer in the field of topology and made number theory into a science, stating the prime number theorem and the law of biquadratic reciprocity. For 10 points, name this Swiss Mathematician who analyzed and solved the konigsberg bridge problem.

## Leonhart EULER

It was centered on the middle reaches of the Niger River, and at its height extended from the Atlantic to Nigeria. Askia Muhammad was its greatest ruler. In 1591 it was destroyed by invading Moroccan forces. For 10 points, name this great trading empire of West Africa of the fifteenth and sixteenth centuries.

## SONGHAY

She was a moody, agoraphobic chain-smoking, often frustrated with her role as a faculty wife in a small Vermont college town. However, her lighthearted 1953 best-seller about her own children, Life Among the Savages, portrayed her family in a happier light. for 10 points, name this California-born writer whose name is more often associated with her 1948 short story "The Lottery".

Shirley JACKSON
First built in 1881 by Michelson, it is a device used to measure lengths and changes of lengths with great accuracy by means of interference fringes. A beam of light is split, and the 2 rays follow different paths before recombining. For 10 points, name this machine that won Michelson the Nobel prize in physics in 1907.

INTERFEROMETER
William Shakespeare used a brilliant translation of his work done by Sir Thomas North for material for many of his historical plays. He wrote biographies in pairs, each comparing one Greek and one Roman statesman or general. For 10 points, name this author of Parallel

Lives of Illustrious Greeks and Romans.
PLUTARCH
This Harvard psychologist collaborated with Kohlberg for a time, but broke with him because his six stages of moral development implied that women were morally inferior. She developed her own theory of an "ethic of caring" among women in her most famous work, In A Different Voice. For 10 points, name this woman who shares her name with a Bob Denver character.

Carol GILLIGAN

1993 Hop on Pop Invitational Nov. 19-20, 1993
Bonus Questions from WMU A.
For 10 points each, name these characters from Theodore Dreiser's An American Tragedy.

1. The main character, whose dreams of wealth lead him to murder.

Clyde GRIFFITHS
2. The young factory girl whom he plots to murder and then accidentally kills.

Roberta ALDER
3. The wealthy heiress whom he hopes to marry.

Sandra FINCHLY
Did you have a rotten day? If you did, you'll love this 30 -point bonus--it's all about the spectacularly grumpy people immortalized in the 1987 compilation The Portable Curmudgeon. You'll get 10 points each for naming them.

1. First, name the New York humorist, ex-cab driver, and author of Metropolitan Life, who wrote about shopping in her neighborhood: "There's one store called Bonjour Croissant. It makes me want to go to Paris and open a store called, 'Hello, Toast."

Fran LEBOWITZ
2. Second, name the Baltimore columnist, misanthrope, and critic of the early 20th century, who once observed: "Hamlet has been played by 5,000 actors. It's no wonder he's crazy."
H.L. MENCKEN
3. Finally, name the California writer who edited the compilation The Portable Curmudgeon and its sequels including A Curmudgeon's Garden of Love, claiming to hav e"been in a bad mood since 1971." Jon WINOKUR

Note the following countries: Zaire, South Africa, Sudan, Mali, and Algeria. Now, for 5 points apiece with a 5 -point bonus for getting all 5, place them in order from largest to smallest in total land area.

SUDAN, ALGERIA, ZAIRE, MALI,
SOUTH AFRICA
We all love those one-hit wonder groups of the sixties and seventies, don't we? For 10 points each, given their one hit, name the group.

1. "Incense and Peppermints"

STRAWBERRY ALARM CLOCK
2. "Hot Rod Lincoln"

COMMANDO CODY AND HIS LOST PLANET AIRMEN
3. "96 Tears"

QUESTION MARK AND THE MYSTERIONS
It's time to see how familiar you are with the characters of Sir Walter Scott's Ivanhoe. Identify the following characters for five points each, with a 5 -point bonus for getting all four.

1. What is Ivanhoe's given name?

WILFRED
2. The mysterious knight who appears in the novel turns out to be
which King of England?
RICHARD I or RICHARD THE LIONHEARTED (or equivalents...)
3. This woman is the object of Ivanhoe's affection.

ROWEENA
4. This man, Cedric the Saxon's court fool, is a great deal more intelligent than his title would indicate.

WAMBAUGH
For the stated number of points, identify these American Indian leaders who vigorously opposed white expansion.

1. (for 5 points) the Chief of the Shawnees who organized a 1763 Rebellion against the British in the Great Lakes area.

PONTIAC
2. (for 10 points) The chief of the Oglala Sioux who is the only Indian credited with winning a war against the U.S. government, the Powder River War of 1867-68.

RED CLOUD
3. (for 15 points) The Chief of the Seminoles who led resistance to removal from Florida in the Second Seminole War.

OSCEOA
For fifteen points apiece, name the losing U.S. Vice-Presidential candidate in the following years.

1. 1972

Sargent SHRIVER
2. 1976

Robert DOLE
Identify the following artist from a list of his works, 30-20-10.

1. "The Intervention of the Sabine Women"
2. "Portrait of Madame Recamier"
3. "Death of Marat"
Jacques-Louis DAVID

I've been a Catholic all my life, but I usually miss Catholic questions. But enough about me; it's time to test YOUR knowledge of the Catholic faith. There are seven official sacraments in the Catholic Church. For 5 points each, name up to six of them

> BAPTISM (or CHRISTENING)

EUCHARIST (or COMMUNION)
CONFESSION (or RECONCILIATION)
CONFIRMATION
MATRIMONY (or MARRIAGE)
ORDINATION (or HOLY ORDERS)
LAST RITES (or ANOINTING OF THE SICK)
Identify this man, 30-20-10.

1. While still in his teens he became an oyster pirate and gang leader in the Oakland docks, experiences which formed the basis for stories such as The Cruise of the Dazzler and Tales of the Fish Patrol.
2. His year in the Klondike, where he participated in the Gold Rush of 1897-98, yielded no gold, but did give him the raw material for his best short stories.
3. His short novels Call of the Wild and White Fang are regarded as classic allegories of the struggle in man and beast between savagery and civilization

> Jack LONDON

This law of genetics describes the frequency of genotypes in a population in which mating is random and there is no evolutionary selection pressure. It states that for a gene with 2 alleles, the equilibrium frequency of alleles $p$ and $q$ will remain such that $p$ squared $+2 p q+q$ squared is equal to 1 (or $100 \%$ ). For 25 points, what is the name of this law?

HARDY-WEINBERG Law
(also accept "Hardy-Wienberg ratio" or "Hardy-Weinberg Equilibrium").

It's time to test your knowledge of the composition of musical ensembles. Answer the following questions for 15 points each.

1. What instruments make up a woodwind quintet?

CLARINET, FLUTE, OBOE, BASSOON, FRENCH HORN
2. What instruments make up a brass quintet?

2 TRUMPETS, TROMBONE, FRENCH HORN, and TUBA
Name this guy, 30-20-10.

1. In 1927 he organized the workers' seizure of Shanghai for Chiang Kai-Shek's Kuomintang, and in 1936 persuaded Chiang's mutinous generals not to kill him
2. He helped negotiate the United Front after the outbreak of the Sino-Japanese war in 1937, and served as the P.R.C.'s foreign minister from 1949-1958.
3. He served as Premier of the People's Republic of China from 1949 until his death in 1976.

ZHOU ENLAI (or CHOU EN-LAI)
Name these impressionist artists from a few of their works, 10 points for each correct answer.

1. "Woman Combing her Hair", "At the Milliner's", "The Cotton Exchange".

Edgar DEGAS
2. "Nevermore", "Nave, Nave Mahana", "Haystacks".

Paul GAUGUIN
3. "The Fifer", "Concert in the Tuilleries", "Execution of the Emperor Maximillian".

Edouard MANET
25-point bonus. Write down the names of these human bones: talus, zygoma, calcaneus, ilium, vomer. Now match them with their corresponding location in the human body, choosing from this list: pelvis, nose, heel, cheek, ankle

Given a year and a title, tell who wrote the following works, all of which begin with the words, "The Man who..." 5 points per correct answer.

1. The Man Who Died, 1927
D.H. LAWRENCE
2. The Man Who Would be King, 1889

Rudyard KIPLING
3. The Man Who Died Twice, 1924

Edwin Arlington ROBINSON
4. The Man Who Corrupted Hadleyburg, 1900

Mark TWAIN or Samuel CLEMENS
Of the fifty U.S. National Parks, only seven are located in states east of the Mississippi. For five points each, name up to six of them.

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EVERGLADES
BISCAYNE
ACADIA
Great SMOKY MOUNTAINS
SHENANDOAH
MAMMOTHCAVE
ISLE ROYALE
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It's time to test your knowledge of President Clinton's appointees. Answer each of the following for the specified number of points. 1. for 5 points--Identify Clinton's Attorney General, his third choice after nominees Zoe Baird and Kimba Wood withdrew.

Janet RENO
2. For 10 points--Name Clinton's Secretary of Health and Human Services, a former University of Wisconsin professor. Donna SHALALA
3. for 15 points--Identify President Clinton's Secretary of Agriculture.

Mike ESPY
This city has seen several violent political clashes. In 1984, Indian government troops attacked fortified Sikh separatists, and at least 450 were killed. In a more famous incident in 1919, British troops fired on a crowd of Indian demonstrators, massacring an estimated 379. for twenty-five points, all or nothing, name this city in Northwest India.

AMRITSAR
In 1983, the Internet was finally unified when the Office of the Secretary of Defense mandated the network-wide use of TCP/IP. For 25 points ( 5 points for each word in the correct position), give the full name of the communications standard TCP/IP.

TRANSMISSION CONTROL PROTOCOL/INTERNET PROTOCOL
Identify the following writer for 30 points on the first clue, 20 on the second, and 10 on the third.

1. He was born in 1712 near Geneva. He was a friend and contemporary of Diderot, and aided in the compilation of L'Encyclopedie (LON-see-clo-PAY-dee)
2. He theorized than urban life robbed humanity of all compassion. He favored universal justice and equality before the law, which he set down in his Du Contrat Social.
3. He is best known for his treatises on educational theory, most notably Emile, and his Discourse on the Sciences and the Arts.

Jean-Jacques ROUSSEAU
Human antibodies can be produced in large quantities via the technique of isolating lymphocytes, exposing them to a particular antigen, and then fusing them with cancer cells. First, for 15 points, what term is given to antibodies which are all of one type and are derived from the same parent cell produced in this manner?

MONOCLONAL antibodies
Second, for 15 more points, what is the name given to the fused combination of a cancer cell and a normal cell?

HYBRIDOMA(S)

