PMV - Round 6
January 1998
Question Set for BYU Perpetual Motion, February 1998
Set \#1 of 2 written by Bryce Avery, 1986 BYU team captain
TOSSUPS

1. Take two wires of different metals, join them at both ends, and measure the voltage created between the ends when one end is hotter than the other. Congratulations! You've just built - for 10 points - what common temperature-measuring instrument whose types include $\mathrm{J}, \mathrm{K}, \mathrm{R}$ and S ?

## Answer: THERMOCOUPLE

2. Near the end of Homer's "The Odyssey", Odysseus arrives home in disguise. For 10 points, name his dog who recognizes him under the disguise, wags his tail, and then falls over dead.
Answer: ARGOS (do not accept "Argo")
3. He became an arms dealer in Africa after he quit literature, where he lost a leg before returning to his native France. For 10 points, name this poet whose 1873 collection was only published after his death because he never paid the printer, the work being "A Season in Hell."
Answer: Arthur RIMBAUD
4. The Biblical works of this court painter to King Philip IV include "Joseph's Bloody Coat Brought to Jacob" and "The Supper at Emmaus" (a-MAY-us). For 10 points, identify this 17th-century Spanish artist most famous for his portrait of Pope Innocent X .
Answer: Diego VELAZQUEZ (va-LOSS-kez)
5. It begins the first name of humorist Mr. Perelman, who wrote the Marx Brothers movie "Horse Feathers" and of author Ms. Hinton who wrote "The Outsiders" and "That was Then, This is Now". For 10 points, give this letter of the alphabet used in math for Laplace (la-PLOSS) Transforms and in thermodynamics to mean "entropy".
Answer: S
6. Its southeastern counties include Isle of Wight and Lancaster. Its southwestern counties include Patrick and Henry. For 10 points, name this state whose northern counties include Arlington and Fairfax.
Answer: VIRGINIA
7. It is represented by the Greek letter "eta" (the English " n " with an extra-long tail) and is measured in "poise", where one poise equals one dyne second per square centimeter. For 10 points, give this physical quantity used to describe the amount of internal friction within a fluid, especially motor oil.
Answer: VISCOSITY (vis-COSS-a-tee)
8. If Newt Gingrich is elected President in the year 2000, he'll be only the second man to make it by serving as Speaker of the House first. For 10 points, name the Tennesseean who served as Speaker from 1835 to 1839 and later succeeded John Tyler as the nation's Chief Executive.
Answer. James POLK
9. He asked about his wife Sophia on his deathbed but had no desire to see her, preferring to see his secretary Vladimir Chertkov and his daughters Alexandra and Tatyana instead. For 10 points, name this Russian author who died in 1910, just days after corresponding with the English translator of his work "Resurrection."
Answer: Leo TOLSTOY
10. Within 9 months of Stalin's death in 1953, this colleague of Stalin was removed from the Soviet encyclopedia and executed on Khrushchev's orders: a proper end for a man who ordered the executions of so many others. For 10 points, name this infamous chief of the USSR's secret police.
Answer: Lavrentii BERIA
11. She tears a page in her teacher's anatomy book when she's caught looking at one of its naked figures. But a boy in the class jumps up at the last moment and volunteers to be whipped in her place. For 10 points, name this fictional girl who later gets lost in a cave with Tom Sawyer.
Answer: Becky THATCHER
12. Its first unit had to be hauled 30 miles by oxcart to the nearest airfield. It could fly nearly 2,000 miles without refueling but was still vulnerable to the vertical power dives and hard right turns of Allied pilots. For 10 points, name this Japanese aircraft of World War Two.
Answer: ZERO
13. It lost its charter between 1879 and 1893 because of its numerous epidemics of yellow fever. For 10 points, identify this Southern city that is home to the National Civil Rights Museum, college football's Liberty Bowl, Beale
Street and pro football's Oilers.
Answer: MEMPHIS
14. This country began as a haven for freed and runaway slaves was the 1820 destination of more than 80 free blacks who left the United States. For 10 points, name this African country that finally became independent from Britain in 1961, neighbor of Liberia and whose capital is Freetown.
Answer: SIERRA LEONE
15. James Caulfield described him as a "turtle-eating Alderman with a broad Scottish accent." William Smellie said the best way of understanding his arguments is to "catch him by the nose." For 10 points, name this philosopher who died in 1776 at age 65 after writing "Essays on Suicide and Immortality" also author of "Dialogues Concerning Natural Religion" and "Enquiries Concerning Human Understanding."
Answer: David HUME
16. Its first official governor was John Haynes in 1639. Other governors during the pre-Revolutionary War period included Gurdon Saltenstall, Joseph Talcott, and Robert Treat. For 10 points, name this state governed between 1659 and 1676 by John Winthrop.
Answer: CONNECTICUT
17. Show pigs get this chemical to develop a high lean-to-fat ratio. The velociraptors in the novel "Jurassic Park" lacked it, which caused them upon escape to eat lots of chicken. For 10 points, name this essential amino acid that is now thought, in high doses, to help control human genital herpes.
Answer: LYSINE (LY-seen)
18. This man with the two middle names "Horace Greeley" represented Germany at the 1929 Paris conference on World War I reparations and is credited with stabilizing the country's currency during the Weimar (VY-mar) period. For 10 points, name this financier later acquitted at Nuremberg for his actions as Hitler's economic minister and president of the Reichsbank (RYKES-bonk).
Answer: Hjalmar SCHACHT
19. Ruth Atkins is loved by two Mayo brothers. The one planning to go to sea stays home and marries Ruth, while the other one, planning to stay on the family farm, ends up going to sea. All three characters wind up deeply unhappy and Ruth's husband ends up dead. This is the plot -- for 10 points -- of which 1920 Pulitzer Prize-winning play by Eugene O'Neill? Answer: "BEYOND THE HORIZON"
20. Organic chemists use it to mean "a chemical where all carbon atoms are attached to no more than two other carbon atoms." Inorganic chemists use it as one measure of the strength of a solution. In linear algebra it describes a matrix where the hermetian of the matrix and the matrix commute. FTP, identify this six letter word also used to mean "Gaussian" or "perpendicular to."
Answer: NORMAL
21. Her Oscar came in 1957 for Best Actress in "The Three Faces of Eve." For a very quick 10 points, name this actress who may be better known today as "Paul Newman's wife."
Answer: Joanne WOODWARD
22. He is quoted as saying, "I only met [William Butler Yeats] casually and didn't particularly like him." In 1939, he came to New York City for a visit, two days before Yeats' death. For 10 points, name this British poet who wrote the elegy "In Memory of W.B. Yeats.".
Answer: W.H. AUDEN
23. This German went to Russia as an indigo trader, married a Russian woman, and gave his daughters Russian names. Then he got a divorce, later went to Greece, and died there in 1890 . For 10 points, name this famed archaeologist with a hero's memorial in Athens.
Answer: Heinrich SCHLIEMANN
24. In honor of the 50th anniversary of his joining the big leagues, baseball's acting commissioner Bud Selig announced during the 1997 season that his uniform number 42 will no longer be issued to new players. For 10 points, name this Brooklyn Dodger star and integrator of baseball.
Answer: Jackie ROBINSON
25. It is so often used in business that some Hewlett-Packard calculators do not even give a key to its "common" counterpart. For 10 points, identify this mathematical function beloved by first-year calculus students because it's the only one that equals its own derivative.
Answer: NATURAL LOGARITHM (accept "natural log" or "ex")

BYU Perpetual Motion 1998
Bryce Avery's Set \#1 Boni

1. For 15 points each, name these men on the 1997 Teamsters Union list of least valuable corporate directors, none of whom work for UPS:
A. He replaced Caspar Weinburger as Ronald Reagan's Secretary of Defense.

Answer: Frank CARLUCCI (car-LOO-chee)
B. He replaced James Baker as George Bush's Secretary of State.

Answer: Lawrence EAGLEBERGER
2. During 1997, Mario Lemieux became the 9th man in the NHL Hall of Fame who didn't wait the normal minimum of three years. For 10 points each, name these others who didn't have to wait, either:
A. In 1945, soon after a teammate gave him his nickname, this Montreal Canadian scored 50 goals in 50 games.

Answer: Maurice "Rocket" RICHARD (ree-SHARD)
B. During 1997, he became the first to play in six different decades by skating one shift with a Detroit minor-league team.

Answer: Gordie HOWE
C. He was the only defenseman ever to lead the NHL in scoring.

Answer: Bobby ORR
3. For 10 points each, name these U.S. Presidents from the contents of their libraries:
A. His library near Fremont, Ohio also contains some papers of two contemporaries, author William Dean Howells and cartoonist Thomas Nast.
Answer: Rutherford B. HAYES
B. This president's library also contains the papers of Sumner Welles, who spent four years as his Assistant Secretary of State and six more as his Under Secretary of State.
Answer: Franklin ROOSEVELT (1st initial required)
Accept: FDR
C. Many of his library's items were saved by his personal secretary Ann Whitman and used to write his memoirs "The White House Years" at his farm near Gettysburg.
Answer: Dwight D. EISENHOWER
4. Beryl is a colorless mineral that becomes more valuable when it contains traces of other chemical elements. For 10 points each, identify the name given to beryl when it is:
A. Blue because of iron in a +2 oxidation state.

Answer: AQUAMARINE
B. Pink.

Answer: MORGANITE
C. Green because of chromium in a +3 oxidation state.

Answer: EMERALD
5. During 1997, his first major painting "Home Sweet Home" was sold to the National Gallery of Art for more than two million dollars.
A. For 15 points, name this American painter who died in 1910 and was most famous for his seascapes.

Answer: Winslow HOMER
B. For 15 points, name the American whose poem "Home Sweet Home" includes the words "'Mid pleasures and palaces,

Though we may roam, Be it ever so humble, There's no place like home."
Answer: John Howard PAYNE
6. For 10 points each, name the three "Leatherstocking Tales" of James Fenimore Cooper that have two-word titles where the first word is "The" and the second word starts with the letter P.
Answers: THE PATHFINDER, THE PIONEERS, THE PRAIRIE
7. For 5 points each and a 5-point bonus for all, name the states where sections of these rivers have been designated by the National Park Service as "wild" or "scenic":
A. Buffalo

Answer: ARKANSAS
B. Loxahatchee

Answer: FLORIDA
C. Pere Marquette

Answer: MICHIGAN
D. Great Egg Harbor

Answer: NEW JERSEY
E. Bluestone

Answer: WEST VIRGINIA
8. At the end of Jane Austen's "Pride and Prejudice", three of the five Bennet daughters are married. For 10 points each, give the married name of each sister:
A. Elizabeth

Answer: Darcy
B. Jane

Answer: Bingley
C. Lydia

Answer: Wickham
9. Name the country, 30-20-10.
A. During the 1970 's, when the country was run by the Colorado (or "Red") Party, it had the world's highest ratio of political prisoners to total population.
B. In 1930, a hundred years after it formed its first constitution, it hosted the first World Cup soccer tournament and ended up winning the event.
C. Its military history includes wars with Brazil and Argentina, its only two neighbors. It's capital is at Montevideo.

Answer: URUGUAY
10. Thalassemia (tha-la-SEE-mee-uh) is a rare inherited disease whose best current method of treatment is monthly blood transfusions. For 15 points each:
A. Give the other name for the disease which comes from the doctor who first described it in 1925.

Answer: COOLEY'S ANEMIA
B. This is designed to remove iron from the body that builds up with repeated transfusions. For fifteen points name this eight letter word.
Answer: chelator
11. For 10 points each, answer these questions about the 1997 Tony Awards:
A. Name the creator of "Driving Miss Daisy" who was nominated for "The Last Night of Ballyhoo", a play set in Atlanta during the final night of the Jewish social season.
Answer: Alfred UHRY
B. Name the traveling companion of Cacambo who was the subject of a Sondheim musical that was revived during 1997. Answer: "CANDIDE"
C. Name the actress who played Velma Kelly in the nominated musical "Chicago" but is more famous for her TV role as Frasier Crane's ex-wife Lilith.
Answer: Bebe NEUWIRTH
12. In 1914, the British government appointed Viscount Bryce to head a committee investigating German atrocities at the outbreak of World War I.

For 10 points each:
A. Name the British Prime Minister who gave Bryce his appointment.

Answer: Herbert ASQUITH
B. Name the country where the outrages described in the Bryce Report took place.

Answer: BELGIUM
C. Name the nation whose war crimes were also reported by Bryce after its forces killed hundreds of thousands of Christian Armenians in 1916.
Answer: TURKEY
13. The Reynolds number is a dimensionless quantity used to determine the quality of fluid flow. For 15 points each:
A. Give the term describing relatively quiet flow when the Reynolds number is less than 2,000 .

Answer: LAMINAR (LAM-a-ner)
B. Give the term describing relatively violent flow when the Reynolds number is greater than 4,000 .

Answer: TURBULENT
14. The soon-to-be-published book "Coined by Shakespeare" contains many of the Bard's additions to the English language. For 10 points each, name the Shakespeare play where:
A. Cloten calls Guiderius a "rustic 'mountaineer" but loses his head in the ensuing fight.

Answer: CYMBELINE
B. The murder of Duncan is termed an "assassination."

Answer: MACBETH
C. The title character tells his mother Volumnia, "I go alone, like to a 'lonely' dragon."

Answer: CORIOLANUS
15. He addressed the International Congress of Mathematicians and outlined 23 problems he thought should be studied during the 20th century. For 10 points each:
A. In what year did the speech take place?

Answer: 1900
B. Name this Prussian mathematician whose 10th problem has been proved impossible to solve.

Answer: David HILBERT
C. Hilbert's 1899 book dealt with the foundations of what branch of mathematics?

Answer: GEOMETRY
16. Reuven Malter is an Orthodox Jew who grows up to be a rabbi. His friend Danny Saunders is a Hasidic Jew who grows up to be a clinical psychologist.
A. For 10 points, name the author who created both characters.

Answer: Chaim POTOK
B. Now for 10 points each, name the two Potok novels in which both characters appear.

Answer: THE CHOSEN, THE PROMISE
17. For 10 points each, answer these questions about the city of Providence, Rhode Island:
A. Name the religious denomination whose oldest American church is located in Providence and dates from 1638.

Answer: BAPTIST
B. Name the mascot of Providence's minor-league hockey team. A dead cold Boston favorite.

Answer: BRUINS
C. Name the religious reformer generally credited with founding Rhode Island who has a Providence park named after him.

Answer: Roger WILLIAMS
18. For 15 points each, name these plays by Ibsen that (almost) have a happy ending:
A. The title character drowns at the end of the first act, but in the end, his parents Alfred and Rita agree to stay together instead of splitting up.
Answer: LITTLE EYOLF
B. The title character here dies of a heart attack at the very end, but his death helps bring his wife Gunhild and her twin sister Ella together again.
Answer: JOHN GABRIEL BORKMAN
19. A normal EKG contains heart waves referred to by the letters $P, Q, R, S$, and $T$.
A. For 15 points, which wave, when abnormal, is the most common sign that you've had a heart attack?

Answer: Q
B. For 10 points, which wave is caused as the ventricular myocardium returns to its resting state?

Answer: T
C. For 5 points, which letter refers to the highest vertical movement on an EKG?

Answer: R
20. Between October 1890 and February 1891, the reigning world chess champion and his challenger played a two-game match by correspondence.
For 15 points each:
A. Name the world champion at the time who later lost his title to Dr. Emanuel Lasker.

Answer: Wilhelm STEINITZ (SHTY-nits)
B. Name the Russian challenger who lost two matches to Steinitz over-the-board in 1889 and 1892 but thumped him soundly in both correspondence games.
Answer: Mikhail CHIGORIN (chi-GO-rin)
21. In the winter of 1077, an emperor acknowledged the pope's authority over him by standing barefoot for three days in front of the Italian castle where the Pope was staying until the Pope received him. For 15 points each, name this emperor and the pope who was staying at Canossa.
Answer: HENRY IV (emperor), GREGORY VII (pope)
22. The C.S. Lewis tale "The Lion, The Witch and The Wardrobe" tells the story of how 4 children met the lion and the White Witch.
A. For 5 points each, name the two boys and two girls.

Answer: PETER, EDMUND, LUCY, SUSAN
B. For 10 points, name the lion.

Answer: ASLAN
23. Sir Joseph Banks once wrote of them, "I suppose they live entirely upon fish, dogs, and enemies." For 10 points each:
A. Name this group of people indigenous to New Zealand.

Answer: MAORI
B. Name the treaty the Maori signed with Britain in 1840 whereby William Hobson became their first British administrator.

Answer: Treaty of WAITANGI (wy-TAHN-ghee)
C. Who was the British monarch at the time of the treaty signing?

Answer: Queen VICTORIA
24. Genesis 29 tells the story of how Jacob got a wife. For 10 points each:
A. Jacob originally served 7 years to marry the younger daughter of which man?

Answer: LABAN (LAY-bun)
B. Laban, however, tricks Jacob into marrying which older daughter first?

Answer: LEAH
C. This obliges Jacob to serve 7 more years before he can finally marry which love of his life?

Answer: RACHEL
25. For 10 points each, answer these questions about Dvorak's
(VOR-zhox) "New World" symphony:
A. What key was it written in?

Answer: E MINOR (prompt if " E " is given; do not accept " E major")
B. Near the end of his life, Dvorak's symphonies were renumbered. What
number was originally given to the "New World" symphony?
Answer: 5 or 5TH
C. What is its generally recognized number now?

Answer: 9 or 9 TH

