

# ROUND 3: TOSSUPS

## Bulldog High School Academic Tournament VII

1. Max Euwe [U-vuh]. Vassily Smyslov. Tigran Petrosian. Emmanuel Lasker. Mikhail Botvinnik. Boris Spassky. Anatoly Karpov. Bobby Fischer. These men, FTP, have all held what title?

ANSWER: world chess champion

2. Frequently violated by transition metals, nonmetals larger than aluminum can violate this principle; an example is  $\text{PF}_6$ . Alkali metals also routinely violate this rule. FTP, name this rule, which hydrogen and helium never obey, which says a stable atom has four electron pairs in its outer shell.

ANSWER: octet rule

3. India, its land of origin, leads the world in its production. Leading US producers include Louisiana, Florida, and Hawaii, which produces the world's best crops; but most of it is imported from Puerto Rico and the Philippines. Brought to Europe by the Moors, by 1700 it was produced in the greatest quantities in the tropics of the Americas, especially Brazil. FTP, name this sweet plant of genus *Saccharum*.

ANSWER: sugar cane

4. Though this 1906 tale of the life of the Slavic immigrant Jurgis Rudkis was initially intended as socialist propaganda, its readers focused on its portrayals of the Chicago stockyards instead. FTP, name this work which led new food legislation after it exposed the conditions in the meat processing industry, written by Upton Sinclair.

ANSWER: The Jungle

5. Born October 15, 1881, he has more than 90 books and 20 film scripts to his credit. He also collaborated on 30 plays and comedies. He started writing public-school stories, but he first displayed his legendary wit with his 1913 work *Something New*. His fame comes from his sharp stories set in Edwardian England. FTP, name the author who created Bertie Wooster and Jeeves.

ANSWER: Pelham Grenville Wodehouse

6. Traces of ancient civilization have been found on this waterway as far north as the Simla Hills, and as far south as Karachi. Inhabitants of towns on this river were literate, and developed the first sewer systems. FTP, name this putative cradle of civilization, home to the ancient cities of Harappa and Mohenjo-daro.

ANSWER: Indus River

7. The lyricist for *Love Life* and *On a Clear Day You Can See Forever*, he won an Academy Award for his screenplay for *An American in Paris*. FTP, name this American lyricist who worked on the film *Gigi* and the musicals *Camelot*, *My Fair Lady*, and *Brigadoon* with his longtime partner, Frederick Lowe.

ANSWER: Alan Jay Lerner [DNA: Frederick Lowe]

8. In the lower part of this layer of the atmosphere, temperature increases only slightly with altitude; in the upper part, however, it increases rapidly. By the time one gets to 30 miles above sea level, the temperature is the same as on the surface of the earth. FTP, name this part of the atmosphere that includes the ozone layer.

ANSWER: stratosphere

9. This author first gained attention with his story of the lives of Monterey *paisanos* in *Tortilla Flat*. He followed this with a story about two itinerant farmhands hoping to save enough money to buy a house, and then a book about the Joad family. FTP, name this author of *Of Mice and Men* and *The Grapes of Wrath*.

ANSWER: John Steinbeck

10. This book of the bible is of unknown authorship and date, although many scholars assign it to a time between 600 B.C. and 400 B.C. The main part of the book is cast in poetic form and consists of conversations between the title character and three friends who come to “comfort” him; Satan also first appears in this book. FTP, identify this biblical book, which describes the trials of “a perfect and an upright man.”

ANSWER: Job

11. In college, this person headed the local chapter of the Young Republicans. But after witnessing violence against Democrats in the 1960s, she became a Democrat. Clearly liberal, she wrote her senior thesis on poverty and community development, worked to have blacks admitted to her college, and attended Yale Law School. FTP name this renowned Arkansas lawyer.

ANSWER: Hillary Diane Rodham Clinton or Hillary Clinton

12. WARNING: Full name required. Often called the first American psychologist, his *Principles of Psychology* supported ideas such as functional and pragmatic orientation. He was among the first to claim that consciousness is personal and continuous, thus defining stream-of-consciousness. FTP, name this former Harvard physiology instructor and brother of author Henry James.

ANSWER: William James

13. Steam-driven generator, coolant pump, core shield, containment vessel, control rods, fuel pellets. FAQTP these are all parts of what sort of electricity-generating device?

ANSWER: nuclear reactor or nuclear power plant or nuclear generator [prompt if “nuclear” comes up but the rest is incorrect]

14. His less-famous works include *De temporum fine comedia* [FEE-nay koh-MAY-dee-ah], *Die Kluge*, *Der Mond*, and *Antigone*. His fame, however, rests on a trilogy of choral works. FTP, name this German composer of *Trionfi di Aphrodite*, *Catulli Carmina*, and the oft-recorded *Carmina Burana*.

ANSWER: Carl Orff

15. She was sued when Congress chose to withhold highway funding from South Dakota if it did not raise its drinking age from 19 to 21. Upset with this this piece of legislation, South Dakota sued this Secretary of Transportation under Reagan who had to enforce the law. FTP name this woman who lost a bid to become First Lady in 1996.

Answer: Elizabeth Dole

16. In 1662 Charles II granted the Connecticut colony title to all lands west to the Pacific. Except for a strip of land on Lake Erie, Connecticut gave its western lands to the American government in 1786. In 1800, the isolated strip—over 3.5 million acres—was attached to the Ohio territory. FTP name this region that lives on in the name of Cleveland university combined with Case.

ANSWER: the Western Reserve

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17. Written while its author was in exile, this work argued from a mechanistic view that life is simply the motions of the organism and that man is by nature a selfishly individualistic animal at constant war with all other men. In a state of nature, men are equal in their self-seeking and live out lives which are “nasty, brutish, and short.” FTP, identify this 1651 work of Thomas Hobbes.

ANSWER: Leviathan

18. With her friends Kleonike and Myrrhine she seizes the Acropolis, where Athens’ treasury reserves are held. More effectively, she organizes the women of Greece to withhold sex from their husbands until peace is made. FTP name the title character of a 5th century B.C. comedy by Aristophanes.

ANSWER: Lysistrata

19. In Roman architecture, it describes a large public building with an open interior space, usually with side aisles separated from the main space by rows of columns. Early Christians who wanted to avoid designing churches after Roman temples chose this building type. FTP, name this title granting a church special privileges, such as reserving its high altar for a pope, cardinal, or patriarch.

ANSWER: basilica

20. In 1969, this political party divided into “official” and “provisional” wings; its name means “We Ourselves” or “We Alone”. Under Eamon [EE-mun] de Valera, it won three-quarters of the seats in the Irish parliament in 1918. FTP, name this party linked to the Irish Republican Army, currently headed by Gerry Adams.

ANSWER: Sinn Féin the Workers’ Party or Sinn Féin Pairti Na Noibri

21. This form of hyperthyroidism is characterized by enlargement of the thyroid and exophthalmus [ex-op-thal-mus]. This auto-immune disease is a type of goiter: stimulated by an antibody, the thyroid grows to more than twice its normal size. Though this condition can cause permanent eye damage, FTP, name this disease from which, as far as we know, Jim Phelps didn’t suffer.

ANSWER: Graves’s disease [accept Peter Graves, prompt on “exophthalmic goiter”]

22. He is in prison for trying to sell cocaine to an undercover cop, but he is in bigger trouble for his exploits in Jamestown, New York, where he transmitted AIDS to 10 women under the age of 20. FTP, name this man who was aware of the fact that he had the virus.

ANSWER: Nushawn Williams

23. It took 124 years and a plebiscite before it was completed. Part of an 1873 agreement, the Strait Crossing consortium finally opened this bridge on May 30, 1997. It cost over \$840 million and the jobs of 600 ferry workers. Of course, both the dollars and jobs were Canadian. FTP identify this eight mile bridge that connects New Brunswick and Prince Edward Island.

ANSWER: Confederation Bridge

## ROUND 3: BONI

### Bulldog High School Academic Tournament VII

1. FTP each, give the name of the famous scientist associated with the following observations or ideas.
  - a. The frequency of a wave changes if either the source or receiver moves, allowing their relative velocity to be determined.  
ANSWER: Christian Doppler [accept Doppler effect]
  - b. The recessional velocity of stars is related to a constant times their distance from Earth.  
ANSWER: Edwin Powell Hubble [accept Hubble's Law or equivalents]
  - c. Black holes emit subatomic particles, which could make them detectable.  
ANSWER: Stephen William Hawking [accept Hawking Radiation]
2. Answer these related questions, 10 points each.
  - a. This is the name of the lion in C. S. Lewis's *The Lion, the Witch, and the Wardrobe*.  
ANSWER: Aslan
  - b. This term describes a shirt that has slanted seams on the sleeves, which are often of a different color, like many baseball shirts.  
ANSWER: raglan
  - c. The computer abbreviation LAN stands for this.  
ANSWER: local area network
3. For ten points each, identify the album on which the following songs first appeared.
  - a. "One" by U2  
ANSWER: Achtung, Baby
  - b. "Zombie" by the Cranberries  
ANSWER: No Need to Argue
  - c. "Invisible Sun" by The Police  
ANSWER: Ghost in the Machine
4. Answer these questions about supersonic travel, 10 points each.
  - a. Mach 1 is equal to the speed of sound. Within 5%, what is this value in *miles per hour*?  
ANSWER: 764 mph [accept 726 to 802]
  - b. In what state was the first recorded supersonic travel *on land* recorded?  
ANSWER: New Mexico
  - c. Name the driver, a Royal Air Force pilot, of the car that accomplished this feat.  
ANSWER: Andy Green

5. Answer these questions on ditches, 10 points each.

- a. This "Big Ditch" was completed at a cost of \$337 million under chief engineer George Washington Goethals.  
ANSWER: Panama Canal
- b. This waterway was named "Clinton's Big Ditch" after one of its proponents.  
ANSWER: Erie Canal
- c. A non-navigable floodway, derided as "Duff's Ditch," has saved Winnipeg from this river's floods numerous times since it was built by Premier Duff Roblin's government in the 1960s.  
ANSWER: Red River Floodway

6. With all the memorable Spanish and English exploration of the New World, it's easy to overlook the efforts of France. Name these explorers, 10 points each.

- a. In 1524 the French commissioned this Italian to find a Northwest Passage. He explored New York harbor, where today a bridge is named for him.  
ANSWER: Giovanni de Verrazano
- b. In 1534 this Frenchman explored the St. Lawrence River as far as present-day Montreal.  
ANSWER: Jacques Cartier
- c. In 1608 this Frenchman built a fort in Quebec and explored the Maritimes and New England; the following year he explored a lake that now rests on the New York-Vermont border.  
ANSWER: Samuel de Champlain

7. How well do you know your Coke science? Answer the following question about Coca-Cola Classic, 15 points each.

- a. Within 10, how many calories are in a 12 ounce can of Coke?  
ANSWER: 140 (130 to 150)
- b. Within 3 percent, what percent of the recommended daily intake of carbohydrates is contained in a 12 ounce can of Coke?  
ANSWER: 13% (10% to 16%)

8. 3 B/STI. Answer these questions related to genetics.

- a. For 10 points each, give the genus and species name for the common fruit fly?  
ANSWER: Drosophila melanogaster
- b. And for 10 points, linked genes do not follow what Mendelian law of inheritance?  
ANSWER: Law of Independent Assortment [ACC: reasonable alternatives]

9. Identify these related creatures from descriptions, 10 points each.

- a. In Jewish folklore, this human effigy is animated through a magical word inscribed on its forehead or hand.  
ANSWER: golem
- b. These little, mischievous spirits of tools and machinery sabotage equipment to spite engineers.  
ANSWER: gremlin
- c. These three daughters of Phorcys and Ceto included two immortals, Stheno and Euryale; all had live snakes for hair.  
ANSWER: the Gorgons

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10. 10 points each. Name the country from its former Communist Leader.

- a. Nicolae Ceausescu ANSWER: Romania
- b. Janos Kadar ANSWER: Hungary
- c. Ramiz Alia ANSWER: Albania

11. 30-20-10. Name the poet from works.

- 30: "Heart's Rest", "Come Away, Death"
  - 20: "The Phoenix and the Turtle", "The Rape of Lucrece"
  - 10: "Venus and Adonis", "The Sonnets"
- ANSWER: William Shakespeare

12. Answer these questions about IQs for 10 points each.

- a. Name either of the scientists credited with inventing the first IQ test in 1905.  
ANSWER: Alfred Binet or Theodore Simon
- b. The term "IQ" was first coined by L. M. Terman at what California university?  
ANSWER: Amasa Leland Stanford, Jr. University
- c. This eleven-letter term describes any non-verbal test of intelligence.  
ANSWER: performance test

13. Given a pair of songs, name the Rodgers and Hammerstein musical on a 15-5 basis.

- a. 15: "Out of My Dreams," "All 'er Nothin'"  
5: "Surrey with the Fringe on Top," "Oh, What a Beautiful Morning"  
ANSWER: Oklahoma
- b. 15: "What's the use of Wond'rin," "Soliloquy"  
5: "If I Loved You," "You'll Never Walk Alone"  
ANSWER: Carousel

14. The Super Bowl recently occurred, so answer these questions about it for the stated number of points.

- 5: How many Super Bowls have there been?  
ANSWER: 32
- 10: In what stadium did Super Bowl XXXII occur?  
ANSWER: Qualcomm Stadium [not Jack Murphy anymore]
- 15: What is the name of the recently renovated San Diego airport?  
ANSWER: Lindberg Field or International Airport

15. For 15 points each, name the battle with the word "bridge" in its name, from a description.

- a. 11th century battle where Anglo-Saxon King Harold destroyed the Viking army, also led by a Harold. The site shares its name with a Connecticut city.  
ANSWER: Stamford Bridge
- b. 4th century battle where Constantine defeated Maxentius to become the undisputed ruler of the Western Roman Empire  
ANSWER: Milvian Bridge



16. 30-20-10. Identify the writer from clues.

30: He wrote the short stories *Jean Beicke*, *A Face of Stone*, and *The Farmers' Daughters*.

20: He wrote the long poem cycle *Paterson*

10: This doctor wrote the poems "Lighthearted William," "By the Road to the Contagious Hospital," and "Red Wheelbarrow"

ANSWER: William Carlos Williams

17. For 5 points, what name is given to numbers  $N$ , whose factors sum to  $N$ ?

ANSWER: perfect numbers

Five points for one, 15 for two, and 25 for three, give any three of the four smallest perfect numbers. *You have 15 seconds to begin your answer.*

ANSWER: 6, 28, 496, 8128

18. 30-20-10. Identify the artist from works.

30: *The Girl in White*

20: *Nocturne in Black and Gold: The Falling Rocket*

10: *Arrangement in Black and Gray No. 1: The Artist's Mother*

ANSWER: James Abbot McNeill Whistler

19. Name the Jules Verne novel from characters, 10 points each.

a. Passepartout [pass-par-too], Detective Fix, Phileas Fogg

ANSWER: *Around the World in 80 Days* or *Autour du Monde en 80 Jours*

b. Professor Hardwigg, Henry, Hans

ANSWER: *Journey to the Center of the Earth* or *Voyage à la centre du monde*

c. Cyrus Smith, Gideon Spilett, Neb, Pencroff, and Herbert Brown

ANSWER: *The Mysterious Island* or *L'Ile mystérieux*

20. 30-20-10. Identify the philosopher.

30: He invoked the names of Apollo and Dionysus to reflect two fundamental human impulses: Apollo as order, lawfulness, and precision, and Dionysus as change, creation, and destruction.

20: Two lesser known works are 1872's *The Birth of Tragedy*, and 1886's *Beyond Good and Evil*.

10: Apologists for Nazism seized on much of his writing as a philosophical justification for their doctrines, but most scholars judge this as a perversion of his thought. One of his famous works is *Thus Spake Zarathustra*

ANSWER: Friedrich Nietzsche

21. Answer these questions on the great Peloponnesian War, for the stated amount of points.

5: Which classical historian's thorough account of the conflict, *History of the Peloponnesian War*, is still the best record we have of that time period?

ANSWER: Thucydides

10: Which Spartan military commander brought about Athens' defeat with his naval victory at Aegospotami (*ay-gos-pa-to-mai*) and his crushing blockade of the Attican peninsula?

ANSWER: Lysander

15: Which demagogic statesman in Athens kept his fellow citizens from accepting Sparta's peace overtures early in the war and encouraged an offensive fighting strategy before dying at the Battle of Amphipolis in 422 BC?

ANSWER: Cleon

22. You have  $6.6 \times 10^{-8}$  moles of nickel ions dissolved in 1 liter of water. The solubility constant,  $K_{sp}$ , of nickel carbonate is  $6.6 \times 10^{-9}$  molar. Answer the following about this system for 10 points per answer.

- a. How many moles sodium carbonate can be added without precipitation? *You have 15 seconds.*

ANSWER: 0.1 mole

- b. The solubility would decrease if the solution already contained some carbonate. What effect explains this?

ANSWER: common ion effect [prompt on "Le Chatelier's principle"]

- c. Common ion effects are special cases of what principle that states that equilibrium shifts to relieve stress in a system?

ANSWER: Le Chatelier's principle

23. Name these Canadian works of fiction, 10 points apiece.

- a. This Alice Munro novel recounts the adventures of adolescent Dell Jordan, growing up in a small town in Western Ontario.

ANSWER: Lives of Girls and Women

- b. The title of this Margaret Laurence novel refers to the statue of the main character Hagar's deceased mother that overlooks a fictional version of the town of Neepawa, Manitoba.

ANSWER: The Stone Angel

- c. The title of this semi-autobiographical novel refers to the protagonist's role in life. The first book in Robertson Davies' *Deptford Trilogy*, it chronicles the life of a private school teacher.

ANSWER: Fifth Business