

**Varsity Quiz
Semi Final Match II**

Round 1

1. Identify the part of a comet that is its cloudy atmosphere.

Answer: Coma

2. Name the effect that demonstrates the change in light and radio waves by measuring the velocities of distant objects.

Answer: Doppler effect

3. Identify the American abolitionist featured in the 1999 statue *Step on Board* located in the South End neighborhood of Boston celebrating her bravery and those who fled slavery in the American South.

Answer: Harriet Tubman

4. Name the English playwright whose work is the basis for British composer Benjamin Britten's well-known opera *A Midsummer's Nights Dream*.

Answer: William Shakespeare

5. In which country is the original Piedmont region located at the base of the Alps in the upper valley of the Po River. This region's capital is Turin.

Answer: Italy

6. **Math Question:** What is the greatest common factor for the binomial $18x^3y - 48x^4$.

Answer: $6x^3$

7. Which Persian word literally meaning "sign of god" is used as a title for the leader of the Shiite sect of the Muslim religion.

Answer: Ayatollah

8. What word designating an artistic style of literature and architecture is loosely used to describe the lifestyle of black trench coats, black clothing, black shoes, and black masks.

Answer: Gothic

9. What special quadrilateral will be formed by drawing a line segment from the midpoint of one side of an equilateral triangle to each of the midpoints of the other two sides.

Answer: Rhombus

10. In 1999 archaeologists found in the ruins of a temple at the foot of the Yucatan Peninsula, a throne about 9 feet wide and 5 feet deep built about 760 A.D. by one of the last rulers of which civilization.

Answer: Mayan

11. Which style of classical Greek architecture is characterized by an elaborate design of acanthus leaves and is the order developed in the 5th century B.C.

Answer: Corinthian

12. **Math Question:** The perimeter of a regular polygon is 96 inches. Find the length of each of its sides if each exterior angle measures 45 degrees.

Answer: 12 inches

13. Name the activity associated with ribosomes in plant and animal cells.

Answer: Protein synthesis

14. Name the famous sea battle that assured the defeat of Marc Antony and Cleopatra.

Answer: Battle of Actium

15. What name is given to the throne of the Shah of Iran.

Answer: The Peacock Throne

16. Name the state capital of Tennessee. It is the second largest city in the state.

Answer: Nashville

17. Name the American author whose last full length work of fiction titled *True at First Light* was published in 1999 some 38 years after his death. He is best known for his novels *For Whom the Bell Tolls* and *The Old Man and The Sea*.

Answer: Ernest Hemingway

18. Name the calendar of 365 $\frac{1}{4}$ days based on the Egyptian solar calendar and used in Europe from 46 B.C. until replaced by the Gregorian calendar in the 16th century. It was established by Roman emperor Julius Caesar.

Answer: Julian Calendar

19. Name the High School and the city in which it is located that was the 1st Southern High School in 1957 to be integrated following the Supreme Court's Brown vs The Board of Education.

Answer: Central High school in Little Rock

20. Name one of the two West Point graduates who completed 2 full terms as Presidents of the US.

Answer: Ulysses S Grant and Dwight Eisenhower

21. Name the French Impressionist whom Pablo Picasso called "the father of us all". His unfinished oil painting *Large Bathers* is part of the permanent collection of the Philadelphia Museum of Art.

Answer: Paul Cezanne

22. **Math Question:** What value of t will cause the line passing through $(5,t)$ and $(-3,2t)$ to have a slope of 4

Answer: -32

23. Name the author of *The Canfield Decision*, a 1976 novel about the downfall of a Vice President. On October 10, 1973 this author resigned his position as Richard Nixon's Vice President

Answer: Spiro Agnew

24. In 1999, the US Mint issued the 2nd in its series of quarters honoring the 50 states. It features the statue *Commonwealth*, honoring which state, the 2nd to enter the union.

Answer: Pennsylvania

25. The Milky Way is the galaxy that includes our solar system. According to appearance or shape, what type of galaxy is the Milky Way?

Answer: Spiral

Round 2
Bonus Round

1. Which American novel, published in 1961, includes the characters General Dreedle, Captain Black, Colonel Cathcart, and Lieutenant Milo Mindbender.

Answer: Catch-22

Bonus: Identify the following concerning the novel Catch 22: 1st Name the 256th squadron commander who was promoted by a machine AND 2nd name the war during which this novel is set.

Answer: Major Major Major and WWII

2. In 1508, English King Henry the seventh sent John Cabot's son Sebastian to look for a water route "by the north to Cathay" through the land his father had discovered in 1497. Give the name by which this sought after fabled northern water route across North America became known.

Answer: Northwest Passage

Bonus: Identify the following concerning crossings: 1st Name the ruler whose cavalry in 334 B.C. crossed the Granicus River and defeated the Persians and 2nd Name the Spanish conquistador and explorer who led the first European expedition to reach the Mississippi River and cross it into Arkansas in 1541.

Answer: Alexander the Great and Hernando De Soto

3. **Math Question:** If the radius of a right circular cone is doubled and the height is halved, by what factor is the volume multiplied?

Answer: Two

Bonus: 1st give the simplified result of the binomial expansion of $x + 2$ quantity cubed AND 2nd What is the arccosine of $-1/2$.

Answer: $x^3 + 6x^2 + 12x + 8$ and $2\pi/3$

4. Which Southern border state is known as the "Dark and Bloody Ground" because of the bloody fighting in its history that occurred there.

Answer: Kentucky

Bonus: Identify the following concerning fighting: 1st name the Southeastern Conference team known as the "Fighting Tigers" and 2nd name the U.S. ship nicknamed "The Fighting Lady".

Answer: Louisiana State University and U.S.S. Yorktown

5. In 1995, 33 countries were represented by 140 young pianists vying to earn a \$25,000 top prize by playing the music of which great Polish-born composer.

Answer: Frederic Chopin

Bonus: Identify the following concerning music: 1st name the composer of the operas Aida, Il Traviatore, and La Traviata and 2nd name the first lady who is the subject of an opera commissioned by the Houston Grand Opera.

Answer: Giuseppe Verdi and Jacqueline Kennedy

6. **Math Question:** Iodine-131 has a half-life of 8 days. How long will it take 400 grams to decay to 50 grams.

Answer: 24 Days

Bonus: Answer the following chemistry question: 1st which element, now used in medicine as a radioactive tracer was the 1st artificially created element. It was first called masurium and then renamed with a word meaning “artificial” and 2nd according to Graham’s Law, how much faster does hydrogen gas diffuse than oxygen gas?

Answer: Technetium and 4 times as fast

7. On which Mediterranean island did the Greeks establish the Corinthian colony of Syracuse after they colonized the eastern part of the island in the 700’s B.C.

Answer: Sicily

Bonus: Name the following concerning islands that played an important part in the history of Ancient Greece: 1st name the home of the Minoan civilization AND 2nd name the site of the great Colossus.

Answer Crete and Rhodes

8. Name the longest of Shakespeare’s plays, one containing more than 3800 lines including 1400 for the play’s central Character, a young Danish prince.

Answer: Hamlet

Bonus: Identify the Shakespearean plays in which the following lines appear: 1st “If music be the food of love, play on” AND 2nd “And with thy bloody and invisible hand/ Cancel and tear to pieces that great bond/ which keeps me pale”.

Answer: Twelfth Night and Macbeth

9. With which profession are Edward Steichen, Alfred Stieglitz, and Ansel Adams primarily associated.

Answer: Photography

Bonus: Identify the following by giving an answer that begins with the letter “P”: 1st identify the term used in zoology to describe any appendage adapted for seizing, grabbing, and holding on and 2nd name the chart designed by Dmitry Mendeleev.

Answers: Prehensile and Periodic Table

10. **Math Question:** If triangle ABC is congruent to triangle KLM, to what triangle is triangle MLK congruent?

Answer: Triangle CBA

Bonus: 1st What is the product of the complex numbers 8 plus 3i and 8 minus 3i AND 2nd if vector a is 5i minus 12j, what is the unit vector in the direction of a .

Answers: 73 and $5/13i - 12/13j$

11. Identify the French inventor of underwater breathing equipment, who in 1951 began exploring the oceans with his research ship *Calypso*. He wrote *The Living Sea* and he created several underwater films including *The Silent World*.

Answer: Jacques Cousteau

Bonus: identify the following concerning oceanic exploration: 1st name the deep sea diving vehicle Auguste Piccard invented in the 1940’s and 2nd Name the Island, North of which is found the deepest point of the Atlantic ocean.

Answer: Bathyscaph and Puerto Rico

Round 3

Speed Round

1. Name the bodily organ that stores glycogen.

Answer: Liver

2. Name the British prime minister whose mother, Jennie Jerome, was an American.

Answer: Winston Churchill

3. Identify the mixture of liquid rock gases and mineral crystals that surfaces through cracks in the earth's crust and mantle and forms igneous rock.

Answer: Magma (lava is a form of Magma)

4. Name Nathaniel Hawthorne's 1851 story about the Pyncheon family.

Answer: House of the Seven Gables

5. What name did Ernest Rutherford in the early 20th century coin for the positively charged rays given off by radioactive substances.

Answer: Alpha rays

6. Name the Spanish writer who parodied chivalric romances in Don Quixote.

Answer: Cervantes

7. Name the Saudi Arabian city where the Holy Mosque of the Prophet of Muhammad, the founder of Islam, is located.

Answer: Medina

8. Which word including the root for "flame" identifies an abnormal condition of swelling and pain when the body's tissues react to injury.

Answer: Inflammation

9. Which two-word term is commonly used as the title of a head of government in a parliamentary system such as that of Britain.

Answer: Prime Minister

10. Name the woman who became Henry the eighth's third wife in 1536. She bore Henry's only surviving son.

Answer: Jane Seymour

11. Identify the term that means the time required for a chemical reaction to convert half of the initial reactant to product.

Answer: half-life

12. The Perseid and the Orionid are examples of what astronomical event?

Answer: Meteor Showers.

13. Name the city, near the Tennessee River, where the Women's Basketball Hall of Fame opened in 1999.

Answer: Knoxville

14. Name the word beginning with the Letter **P** that is basically a synonym for prime minister, designating a leader with the same authority and responsibilities.

Answer: Premier

15. Name the Arkansas city where President Bill Clinton was born.

Answer: Hope, Arkansas

16. Which term derived from another word for dog designates those teeth resembling dog's fangs.

Answer: Canines

17. In which state did Spiro Agnew serve as Governor?

Answer: Maryland

18. Name the river Julius Caesar established as a defensive boundary against invasion from the barbaric Germanic tribes.

Answer: Rhine River

19. Name the Swedish diplomat who saved tens of thousands of Hungarian Jews from the Nazis during the latter part of WWII and then vanished shortly before the end of the war.

Answer: Raoul Wallenberg

20. Name the excretory organ in the body which includes the Loop of Henle that leads from Bowman's capsule to the organ's central cavity.

Answer: Kidney

21. **Math Question:** Eli's wage of \$20 per hour is $\frac{5}{4}$ of Ben's wage and $\frac{4}{5}$ of Tom's wage. Find the sum of Tom's and Ben's hourly wage.

Answer: \$41

22. Name the Emperor of Japan who took the throne in 1989 upon the death of his father Hirohito in 1989.

Answer: Akihito

23. Identify the name given to the incomplete prehistoric female skeletal remains found in Ethiopia in 1974. She was named for a Beatles song that was playing in the discoverer's camp.

Answer: Lucy

24. Name the Roman Emperor who built the First Saint Peter's Church about A.D. 325. He was the first emperor of Rome to become a Christian.

Answer: Constantine

25. Which Spanish word for village identifies any communal village of native American peoples of the southwestern U.S.

Answer: Pueblo

26. What is the ratio of the surface gravity of the moon to that of the earth.

Answer: about 1/6 that of the earth

27 Name the city where O'Hare Airport is located.

Answer: Chicago

28. Name the Iowa-born artist who featured the people and landscapes of his native state in such works as *American Gothic*.

Answer: Grant Wood

29. In which state does the Mackinac Bridge link the states upper and lower peninsulas.

Answer: Michigan

30. Name the scientist who developed the polio vaccine.

Answer: Jonas Salk

31. Identify the Egyptian Pharaoh who ruled from 1367 to 1350 BC and was married to Queen Nefertiti.

Answer: Akhenaton (accept Akhnaton)

32. What nuclear particle has a mass of 1.007 amu and carries a positive charge?

Answer: Proton

33. Which US President served during the nations first great depression, the Panic of 1837. He was the 8th to hold this office.

Answer: Martin Van Buren

34. Name the Italian American physicist and Nobel Laureate who in 1942 created the first controlled nuclear fission chain reaction at the University of Chicago.

Answer: Enrico Fermi

35. Which European capital city is located on the Amstel River? This city's name means dam of the Amstel.

Answer: Amsterdam

36. On March 27th, 1933 which country resigned from the League of Nations after having been branded the willful aggressor in Manchuria? This country later attacked Pearl Harbor.

Answer: Japan

37. On which Island, where Eric the Red established the first settlement, did Leif Ericsson become the leader after his father's death.

Answer: Greenland

38. To which French King is attributed the expression, "L'Etat, c'est moi" or I am the state?

Answer: Louis the 14th