

NEW TRIER SCOBOL SOLO 2010

ROUND 7

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1. In the upper left corner of one work by this painter, a dying sinner lies in a bed surrounded by five people while an angel pours water on him and a black devil sits sideways. The opposite corner of that work shows the entrance into Heaven and is titled *Glory*. The center of that painting shows Jesus and a Latin inscription meaning “Beware, Beware, God Sees” and is surrounded by depictions of the seven sins. This painter’s *Allegory of Gluttony and Lust* used to appear below another work which shows several people, including a nun strumming a lute, trying to eat a piece of meat hanging from a pole in a boat. Another painting by this artist shows a pair of ears with a knife on the right side and God presenting Eve to Adam on the left side. Name this Dutch artist who painted *Ship of Fools* and the triptych (TRIP-tich) *The Garden of Earthly Delights*.

ANSWER: Hieronymus **Bosch**

2. A pioneering theorist in the study of these materials was Pierre-Ernest Weiss, though explaining them required the understanding of exchange interactions in quantum theory. One phenomenon associated with them can be measured in a Rowland (ROH-lund) ring, and these materials can be described by the spherical or Ising (“icing”) models. The aforementioned effect is often shown as an S-shaped loop and is called hysteresis. These materials are comprised of regions with aligned moments that break down above the Curie temperature and are called domains. With examples like cobalt, nickel, and its namesake element, name this phenomenon contrasted with diamagnetism and paramagnetism.

ANSWER: **ferromagnets** [accept word forms, e.g. **ferromagnetism** or **ferromagnetic**; prompt on **magnets** or word forms thereof]

3. In this story, the narrator remembers a song titled “The Haunted Palace” performed by his childhood friend, and the narrator reads the story “Mad Trist”. That friend lives in a residence with a fissure in the front going all the way from the top to the bottom. When Madeline dies, she is buried beneath the house, and the narrator learns that she is a twin with his friend Roderick. There are two versions of this story, since it was edited before being included in *Tales of the Grotesque and Arabesque*. Name this short story by Edgar Allan Poe about the end of a family.

ANSWER: “The **Fall of the House of Usher**”

4. This country’s 1848 revolution was inspired by a speech by Lajos Kossuth (LA-joshe KO-shoot), but on October 6, 1849, its Prime Minister and its Thirteen Martyrs of Arad were executed. Its Andrew the Second was a leader of the Fifth Crusade, and this is the modern country most closely associated with the Árpád dynasty that ruled from the 9th through 14th centuries. It was ruled for several years by Miklos Horthy until he stood up to the Nazis during World War Two and by János Kádár (YA-noshe ka-dar) after he agreed to oppose Imre Nagy (IM-ray NOJ-ee) and the Revolution of 1956. Name this nation consisting mainly of Magyars that from 1867 to 1918 was part of a Dual Monarchy with Austria.

ANSWER: Republic of **Hungary** [accept **Magyarország** or **Magyar Köztársaság** before “Magyars”]

5. Trombonist Joe Nanton used a toilet plunger as a mute when performing this composer's "East St. Louis Toodle-oo", and many of this person's songs were first sung by Ivie Anderson. This man experienced a career revival when he performed "Diminuendo and Crescendo in Blue" at the 1956 Newport Jazz Festival, which led him to write the film score for *Anatomy of a Murder*. This band leader had early success with "Black and Tan Fantasy" while leading the Cotton Club house band, and he had a string of hits including "Sophisticated Lady", "Mood Indigo", and "It Don't Mean a Thing If It Ain't Got That Swing". Known for his long collaboration with Billy Strayhorn, name this pianist and big band leader from Washington, DC whose signature song was "Take the "A" Train".

ANSWER: Edward "Duke" **Ellington**

6. One character in this work, who takes delight in her own beauty and compares the rest of the characters to oxen, is Emilia. On the other hand, a character who berates women for being obsessed with beauty and being dishonest is Panfilo (pahn-FEE-low). This work also tells of a man who during his last confession tells a series of lies, convincing some people that he is a saint. The leader of the main group of characters, known as the Brigata, in this work is Pampinea (pahmp-ee-NAY-uh), and it is her idea for the group to include three men in addition to seven women. Identify this collection of one hundred tales that includes a frame narrative set near Venice during the bubonic plague, written by Boccaccio (bo-KACH-ee-oe).

ANSWER: The **Decameron** Tales

7. Bill Clinton said of this person, "He thinks he is the superpower and we are here to do whatever he requires." This person argued for the release of Jonathan Pollard before signing the Wye River Memorandum in 1998. Ten days after President Obama gave a major speech in Cairo, this politician gave a speech calling for a new demilitarized nation to be created next to his own. This leader originally served as Prime Minister during the late 1990s, during which he took a controversial interpretation of the phrase "military zone" to weaken the Oslo Accords. He recently has been in negotiations with George Mitchell and Mahmoud Abbas (makh-MOOD ah-BAHS) which have been bogged down on the issue of settlements in land designated as occupied territories. Name this chairman of the Likud (lee-KOOD) Party, the current leader of Israel.

ANSWER: Benjamin "Bibi" **Netanyahu**

8. This person abandoned his major leadership position soon after his deputy Song Jiaren was assassinated, probably on orders from Yuan Shikai. A doctor before starting the Revive China Society, this leader's Three Principles of the People were nationalism, democracy, and socialism. The Revive China Society joined with other groups and evolved into the Kuomintang, which this leader is also considered a founder of. Name this Father of the Chinese Revolution who is still revered in both China and Taiwan.

ANSWER: **Sun** Yat-sen [or **Sun** Wen; or **Sun** Zhongshan; prompt on **Yat-sen**]

9. Though it did not concern electromagnetism, this concept was first named by Hans Christian Ørsted (UR-stehd), and a notable example involving quantum entanglement relied on pion decay. One biological application of this concept employed a folding funnel to overcome Levinthal's protein conformation paradox, while Freeman Dyson used his namesake sphere to resolve another example in which Earth's energy reserves are exhausted. Isaac Newton's seminal one placed a cannon on a mountaintop to demonstrate that gravity caused planetary motion, and Maxwell's demon and Schrodinger's cat are the most famous ones from thermodynamics and quantum mechanics, respectively. Frequently used by Einstein while developing relativity theory, name this form of the scientific method in which a hypothesis or principle is tested only in the mind.

ANSWER: **thought experiment** [or **Gedankenexperiment**]

10. Based on the poems of Aloysius Bertrand, this composer wrote a collection consisting of *Ondine* (AHN-deen), *Le Gibet*, and *Scarbo*. The rhapsody by this composer contains a *Feria* and a *Malaguena* and probably was inspired by his Basque (bask) mother. Those works are *Gaspard de la nuit* and *Spanish rhapsody*. Another piece by this composer has a snare drum rhythm and a single theme played louder and louder by different sets of instruments; it was originally a ballet composed for Ida Rubenstein. Name this rival of Claude Debussy (DEH-byoo-see) who composed *Bolero*.

ANSWER: Joseph-Maurice **Ravel**

11. This operation often is combined with transposition for matrices, and matrices which do not change under the combined operations are called Hermitian (hur-MI-shun). Performing this operation on a number, multiplying the result by the number itself, and then taking the square root finds the complex modulus of the number, which is also that number's absolute value or norm. When complex numbers are represented as vectors, this operation reflects over the real axis. Simplifying fractions with complex numbers is often accomplished by multiplying by the denominator after this operation has been done. Name this operation which transforms $a + bi$ to $a - bi$.

ANSWER: **conjugate** [accept word forms, e.g. **conjugation**]

12. One protagonist created by this author is a World War I vet from Chicago who spends two years in India studying under Shri Ganesha (shree ga-NESH-uh). Another of this author's protagonists, who has an affair with Blanche Stroeve after moving from London to Paris, is Charles Strickland. A different novel by this author is about a boy who moves in with his Uncle William and Aunt Louisa after his parents die. That boy, who spends time studying in Heidelberg, was born with a clubfoot. Identify this author who used the life of Paul Gauguin as the inspiration for *The Moon and Sixpence* and created the characters Larry Darrell in *The Razor's Edge* and Philip Carey in *Of Human Bondage*.

ANSWER: William Somerset **Maugham**

13. Some historians claim this man's presidency was harmed by having William Eustis and then John Armstrong, Jr. serve as Secretary of War. During his presidency, Macon's Bill Number Two replaced a bill that was passed a few days before he took office, the Non-Intercourse Act. He was a forceful advocate of the need to control factions and in the necessity of checks and balances, and after allowing the First Bank of the United States to expire in his first term, he signed into law the Second Bank of the United States five years later. Name this man who served as Thomas Jefferson's Secretary of State and who wrote many of the Federalist Papers.

ANSWER: James **Madison**

14. In nuclear chemistry, this term can refer to a metastable nuclide produced by gamma decay, though the more typical form of this concept can also indicate the inertness of complex ions. Alfred Werner employed this concept to replace chain theory with coordination theory, and ambident ligands are key to explaining the linkage type of this concept. Friedrich Woehler provided the first evidence of this concept by comparing ammonium cyanate and urea, while optical activity is the only means of separating enantiomeric examples like *L*- and *D*-glyceraldehyde. Also describing relationships such as *cis* versus *trans* fatty acids and butane versus methylpropane, identify this concept in which two compounds have the same molecular formula but a different arrangement of atoms.

ANSWER: **isomerism**

15. According to one story, this person found discrepancies when he made two witnesses separately describe a woman committing adultery, saving a woman named either Susanna or Shoshana. Earlier, he asked Arioch (ar-ee-OCK) why a decree was so hasty before conferring with Hananiah (ha-nuh-NAI-uh), Mishael, and Azariah (ah-ZAH-ree-uh), and he was able to claim, "There is a God in heaven that reveals secrets." Those three friends, also known as Shadrach, Meshach, and Abednego, survived a fiery furnace. This person was originally given the name Belteshazzar, and he described a creature made of gold, silver, brass, iron, and clay to Nebuchadnezzar. He also interpreted the words *menei menei teikel ufarseen* at Belshazzar's feast; those words became known as "the writing on the wall". Identify this namesake of a Biblical book who was thrown into the lions' den.

ANSWER: **Daniel** [accept **Belteshazzar** before mentioned]

16. Adolphus Peter Elkin said that Australia was the "ideal laboratory" to study this idea, and Claude Lévi-Strauss compared this belief to hysteria. The first written account of this idea was made by James Long after watching somebody's final bear hunt. Used as the title of a book written before *The Golden Bough* by James George Frazer, this concept was claimed by Sigmund Freud to be the first form of father-surrogate; Freud stated that this belief system prevented incest and linked this concept with taboo. Believers of this concept sometimes associate myths with the original ancestor of a clan. This term originally came from the Ojibwe language. Give this term generally associated with sculptures depicting family legends of Native Americans, which usually are in the form of poles.

ANSWER: **totemism**

17. A synthetic form of this substance available over the counter is called menadione (MEH-nuh-di-ohn) and all types of this substance contain a methylated (MEH-thih-lay-tud) naphthoquinone (naaf-thoh-KWI-nohn) ring. Much of the daily requirement of this substance is supplied by *E. coli* in the large intestine, explaining why newborns often receive an injection of this vitamin. Its effect is opposed by warfarin, which prevents this vitamin from participating in the formation of prothrombin. Found in leafy green vegetables, name this fat-soluble vitamin necessary for the synthesis of blood clotting factors.

ANSWER: vitamin **K** [accept **phyloquinone**; accept **phytomenadione**; accept **phytonadione**]

18. In the fourth and final stanza of this poem, the narrator tells his colleagues, "Though much is taken, much abides." In the third stanza, he refers to his son, saying, "He works his work, I mine." In the second stanza, the narrator talks about himself, saying that he has enjoyed and suffered greatly and that, "I am a part of all that I have met." This work ends with the motto "To strive, to seek, to find, and not to yield." Name this monologue by Tennyson that uses the phrase "aged wife" to refer to Penelope.

ANSWER: "**Ulysses**"

19. This operation creates equivalence classes based on the ideal of a ring, and can be used to efficiently express Euler's (OY-lurz) Theorem and Fermat's (fair-MAHZ) Little Theorem without using subtraction and divisibility. It also explains why casting out nines can be used to check calculations. Single-bit Boolean algebra is equivalent to this operation using two, and though it is not a type of number base, this operation is a type of arithmetic. Also known as clock arithmetic, this operation involves residue classes and is often written using congruence notation. Name this type of arithmetic based on division remainders.

ANSWER: **modular** arithmetic [or **modulo**; prompt on **clock** arithmetic before it is mentioned; accept word forms like **modulo** or **modulus**]

20. During a brief time in office, this leader worked closely with Silvestre Terrazas despite a strong rivalry with that man's cousin Luis Terrazas. After making a deal with Adolfo de la Huerta (WAIR-tuh), this leader lived for three years in peace before being assassinated. Though at first allied with Venustiano Carranza, their forces eventually fought, including Álvaro Obregón's defeat of this man at the Battle of Celaya (seh-LIE-yuh). This leader attacked Glen Springs, Texas and Columbus, New Mexico when Carranza rather than this leader of División del Norte (NOR-tay) received Woodrow Wilson's support. Those attacks caused Wilson to send General Pershing on a mission to capture this leader. Name this man who started his career as a bandit.

ANSWER: Pancho Villa (VEE-yah) [or Francisco Villa; accept José Doroteo Arango Arámbula]

Read the tiebreaker questions only if there is a tie after the above 20 questions. The first correct answer wins the match.

TB 1. During the Revolutionary War, the only major building to survive in this city was Saint Paul's Episcopal Church. One of the tourist attractions in this city is the USS *Wisconsin*, and it is also home to the Chrysler Museum of Art and Town Point Park. The second most populous city in the Hampton Roads region, it is at the mouth of the Elizabeth River. It contains Sewell's Point, which is part of the largest naval station in the world. Name this city located near Virginia Beach.

ANSWER: Norfolk, Virginia

TB 2. Two types of this quantity are subtracted to calculate the Lagrangian, and this quantity can be represented by the Hamiltonian. An infinite amount of this quantity was predicted to be necessary in the ultraviolet catastrophe, and the photoelectric effect was explained by stating that this quantity varies only with frequency. Near the surface of the earth, one form of this quantity varies directly with mass and height, while another form of it can be calculated using the formula one-half times mass times velocity squared. This total value cannot be changed if mass is considered one of its forms, while its value within a system can be changed by work. Name this quantity measured in joules, whose varieties include potential and kinetic.

ANSWER: energy [accept specific types of energy, e.g. "(gravitational) potential" or "kinetic"; prompt on any of the following: E, U-sub-g, V-sub-g, K]

TB 3. Name the mode of transportation that...was intended to dock at the spire on top of the Empire State Building; included the infamous hydrogen-filled Hindenburg; and often makes appearances at football games with the word Goodyear on its side.

ANSWER: blimps [or dirigibles; or airships; or zeppelins]