

Round 3

Tossups

(Tossup 1) Tinnitus, a condition that worsens with age, affects this body part. The perforated version of this structure has a rupture that can cause nausea and vertigo. This structure can be referred to as the myringa or tympanic membrane. This body part contains three flexible layers: skin, fibrous tissue, and mucosa. This thin, cone-shaped membrane separates the external ear and the inner ear. For the point, name this part of the ear that often “rings” in response to loud sounds.

ANSWER: eardrums

(Tossup 2) This author’s autobiography was titled *A Backward Glance*. In one satirical novel by this author, a beautiful but insolvent socialite named Lily Bart teeters on the brink of “un-marriageability.” Another novel by this author, which earned the first fiction Pulitzer Prize for a female author, depicts a Manhattan lawyer who is powerless to pursue his true love, the Countess Ellen Olenska. For the point, what Gilded Age-author wrote *The House of Mirth* and *The Age of Innocence*?

ANSWER: Edith Wharton

(Tossup 3) Antonio Da Madalena was the first western visitor to this location. This location was described as “grander than anything left to us by Greece or Rome” by French explorer Henri Mouhot. The central structure of this location contains three rectangular galleries and was built to represent Mount Meru. This location was initially built by Suryavarman II as a Hindu temple dedicated to Vishnu. For the point, name this Khmer temple complex in Cambodia.

ANSWER: Angkor Wat

(Tossup 4) Pierre de Fermat used adequality to find the maxima of functions, before adapting it to find these features related to curves. The limaçon trisectrix is a curve with two of these features at its origin. The line that is perpendicular to this feature of the curve at a particular point is called the normal line. For the point, give this term that describes a straight line that just touches a curve at a particular point.

ANSWER: Tangent

(Tossup 5) A work by this artist lost part of its arm and nose after it was attacked in 1972 by Laszlo Toth. This artist legendarily commanded a creation to speak after hammering it on the right knee. That creation by this artist was a horned Moses for the Tomb of Pope Julius II. A famous work by this artist located in St Peter’s Basilica depicts the Virgin Mary holding the body of Christ. For the point, name this sculptor of Pieta.

ANSWER: Michelangelo

(Tossup 6) The Van der Waals equation subtracts the quantity “nb” from this quantity for gases that are not ideal. This quantity is directly proportional to moles of gas in Avogadro’s Law. This quantity is directly proportional to temperature in Charles’ Law, while Boyle’s law says this quantity is inversely proportional to a gas’s pressure. For 10 points, what quantity, measured in Liters, defines the space occupied by a gas?

ANSWER: volume

(Tossup 7) A philosopher in this country nicknamed the “second sage” moved homes three times in his youth as his mother wished to find a good environment for his upbringing. Another philosopher in this country may have edited the five classics and espoused the Golden Rule. That philosopher from this country had his sayings compiled in the Analects and lived during the Spring and Autumn period. For the point, name this home country of Confucius.

ANSWER: China

(Tossup 8) In one play by this author, a character who is supposed to give a lecture “on the harmful effects of tobacco,” instead ends up complaining about his wife. Another work by this author features Boris Trigorin and the playwright Konstantin. In a later play by this author, the title character falls for a young married woman, Yelena, but she is more interested in the bachelor, Dr Astrov. For the point, name this Russian author of plays like *The Seagull* and *Uncle Vanya*?

ANSWER: Anton Chekhov

(Tossup 9) Euopolemus of Alexandria claimed that this man taught the Phoenicians their alphabet. This man’s age at his death is the source of the phrase “May you live until 120”. This man fled to Midian after killing an Egyptian and married Zipporah. This brother of Aaron died atop Mount Nebo after leading the Israelites to the promised land. For the point, name this man who led the exodus from Egypt and parted the Red Sea.

ANSWER: Moses

(Tossup 10) Three years after this group disbanded, one of this group’s leaders died in Tennessee in an apparent suicide. Jean-Baptiste Charbonneau was the child of a member of this group who had been kidnapped by the Hidatsa from the Shoshone. This group departed from Camp Dubois on May 14, 1804, and began their journey up the Missouri River shortly afterward. For the point, name this group which was formed by Thomas Jefferson to explore the lands acquired after the Louisiana Purchase.

ANSWER: The Lewis and Clark expedition (Accept Corp of Discovery)

(Tossup 11) The best direct evidence for determining this quantity is a Hadean sample containing zircon crystals. The uniformitarian principle stretched this quantity past Bishop Ussher’s figure of 6,000, while Lord Kelvin underestimated it at 20 to 40 million since he didn’t know about radioactive decay in the mantle. For the point, identify this figure, the longest possible time period in geology, now estimated at 4.5 billion years.

ANSWER: age of the Earth

(Tossup 12) In May 2019, extreme congestion led to numerous deaths at this location's Death Zone. "Green Boots" is often used as a marker at this location. A major 2014 avalanche led to 16 deaths at this location's Khumbu Icefall. Climbers at this location are usually accompanied by Sherpa guides. The summit of this mountain was first reached by Edmund Hillary and Tenzing Norgay. For the point, name this tallest mountain in the world.

ANSWER: Mount **Everest** (Accept **Sagarmatha**, accept **Chomolungma**)

(Tossup 13) This work starts and ends with a funeral, the former being that of Shield Sheafson's. This work's protagonist is killed by a dragon in his third battle, and in his second he attempts to beat a foe with a blade called Hrunting. After beating the main antagonist at Heorot, this work's protagonist returns back to Geatland and becomes its king. For the point, name this Old English epic where its title hero kills Grendel.

ANSWER: **Beowulf**

(Tossup 14) In the aftermath of this event, high lead levels were detected in a nearby square. Days before this event, sculptures of the Twelve Apostles were removed for restoration. Donald Trump tweeted that "flying water tankers" should be used during this event. This event led to the evacuation of Ile de la Cite and the collapse of a famous spire. For the point, name this 2019 event which severely damaged a famous Parisian landmark.

ANSWER: **Notre Dame fire** (Accept clear-knowledge equivalents)

(Tossup 15) A nationalist movement in this country was called Poqo before being replaced with the Azanian People's Liberation Army. One party that claimed legitimacy in this country was called "Spear of the Nation" after the Sharpeville massacre. One important figure in this country went through the Rivonia trials and was imprisoned in Robben Island for 27 years. For the point, name this nation of Nelson Mandela that went through apartheid.

ANSWER: **South Africa**

(Tossup 16) In 2009, a Russian woman threw a teacup at this painting. This painting was briefly exhibited at the Uffizi gallery after it was stolen by Vincenzo Peruggia in 1911. This painting is currently displayed in a sealed box protected by bulletproof glass. The name of this portrait comes from Giorgio Vasari who claimed that its subject was the wife of Francesco Del Giocondo. For the point, name this Leonardo Da Vinci painting of a woman with an enigmatic smile.

ANSWER: **Mona Lisa**

(Tossup 17) A character in this novel named Hastie Lanyon claims that the beliefs of one character are "too fanciful." The narrator focuses on the efforts of a lawyer named Gabriel Utterson to learn about the title characters of this work. A maid claims that one of the title characters of this work was responsible for the murder of Danvers Carew. For the point, name this novella by Robert Louis Stevenson about two conflicting personalities.

ANSWER: The Strange Case of **Dr. Jekyll and Mr. Hyde**

(Tossup 18) Genetic material of this agent is surrounded by capsid proteins, which can give the agent a rod, polyhedral, or other complex shapes. CRISPR-Cas system can counter these agents, by removing injected DNA molecules from host genetic material. “Retro” ones of these agents enclose reverse transcriptase, to transcribe its RNA genetic material to DNA in the host cell. For the point, name this pathogen, that can infect cells to cause flu and AIDS.

ANSWER: virus

(Tossup 19) In 1966, this man charged that the Federal Government had made the Vietnam war a “national obsession”. An FBI analysis painted this man as “a whole-hearted communist”. In his most famous action, this man spoke about a “promissory note” and repeated the phrase “Let freedom ring.” For the point, name this civil rights leader of the Southern Christian Leadership Conference who delivered the “I have a dream” speech.

ANSWER: Martin Luther King Jr. (accept MLK Jr.)

(Tossup 20) One of these creatures names Ao Guang was the King of the East Sea. An eight-headed one of these creatures was named Yamata no Orochi. Cadmus slew one of these creatures at the Spring of Ismene while the Golden apples were guarded by one of these creatures named Ladon. In the Golden Legend, one of these creatures terrorized Silene before being killed by St George. For the point, name these mythical reptiles who are often able to breathe fire.

ANSWER: Dragon (Prompt on Serpent)

(Tossup 21) Bachet’s conjecture states that every natural number can be expressed in terms of four of these objects. Every odd one of these objects is a centred octagonal number, and also the sum of two consecutive triangular numbers. These numbers have an odd number of factors, and their prime factorisations only have even exponents. For the point, 1, 4, 9 and 16 are examples of what type of numbers, equal to a number multiplied by itself?

ANSWER: Perfect squares

(Tossup 22) Calls for the development of this structure were instigated by the Fall-Davis report. A political cartoon was published in response to attempts to change this structure’s name by Harold Ickes. This structure impounds Lake Mead, and was named after Boulder Canyon at the time of its construction. For the point, name this dam on the border between Arizona and Nevada now officially named after the 31st President of the United States?

ANSWER: Hoover Dam

(Tossup 23) A postcolonial version of this play set in Haiti was written by Aime Cesaire. A character in this play states that “we are such stuff / as dreams are made on.” In this play, Trinculo and Stephano attempt to help Caliban overthrow his master. In this play, the son of the King of Naples, Ferdinand, falls in love with Miranda. Prospero uses his magic to cause a shipwreck in, for the point, what Shakespeare play about the title storm?

ANSWER: The Tempest

(Tossup 24) A work by this composer features Leonore, who disguises herself as a boy to visit her husband, Florestan, in prison. This man dedicated his third symphony to a famous leader but scratched out the dedication on the score's title page when that leader declared himself emperor. Franz Schubert idolized this composer and was a pallbearer at his funeral. For the point, what musical genius wrote the opera *Fidelio* and the *Eroica* Symphony.

ANSWER: Ludwig van Beethoven

(Tossup 25) Trofim Lysenko earned this leader's support for his experimental research in improved crop yields. One of this man's series of central economic plans included the Stakhanovite movement. "Socialism in One Country" became a central tenet of this man's party. Dekulakization and kolkhozes were features of the first of this man's Five Year Plans. For the point, name this successor of Vladimir Lenin infamous for building gulags.

ANSWER: Josef Stalin

(Tossup 26) A crater was blasted on one of these objects named Tempel 1 to study its interior. Short-period variants of these objects originate from the Kuiper belt, while long-period ones originate from the Oort Cloud. The Orionid shower is caused by the most famous of these objects, said to reappear in 2061. For the point, name these objects with an icy nucleus, a coma and a tail, the most famous of which is named after Edmund Halley.

ANSWER: Comets

(Tossup 27) A trick by this god caused the dwarf Alvis to be turned into stone. This god's chariot is pulled by a pair of ever-replenishing goats. This god's weapon was made for him by Brokkr and Sindri. This father of Magni was both the lover of Jarnsaxa and the husband of Sif. This god will be killed by the venom of the serpent Jormungandr during Ragnarok. The hammer Mjolnir is wielded by, for the point, what Norse god of thunder?

ANSWER: Thor

(Tossup 28) During this battle, George Custer cut off J.E.B Stuart's cavalry as it attempted a rearguard action against the Union forces. A commander said "General, I have no division" after a pivotal assault failed on the last day of this battle. Four months after its conclusion, two speeches were given to commemorate this battle. General Lee ordered the failed Pickett's Charge during, for the point, what decisive July 1863 battle in Pennsylvania?

ANSWER: Battle of Gettysburg

(Tossup 29) This author asked if "my verse is alive" in a letter to Thomas Wentworth Higginson. This author of "*Hope is the thing with feathers*" also wrote "*I'm Nobody! Who are you?*". This reclusive poet concluded her most famous poem with "I first surmised the Horses' Heads / Were toward Eternity" and wrote that "The Carriage held but just Ourselves / And Immortality" For the point, name this "Belle of Amherst" who wrote *Because I could not stop for Death*.

ANSWER: Emily Elizabeth Dickinson

(Tossup 30) A spin-two boson that mediates this force is the only yet-undetected particle in the standard model. The equivalence principle deals with the similarities between experiencing this force and experiencing acceleration. The constant named for this force is about 6.67 times 10 to the minus 11 in SI base units. For the point, name this attractive force between any two objects with mass, which on Earth, explains why objects fall to the ground.

ANSWER: gravity

Backups

(Tossup 31) This ruler ordered the murder of her sister Arsinoe IV on the steps of the Temple of Artemis. This ruler reportedly met a lover in a rolled-up carpet, and she attempted to declare her child Caesarion heir. This ruler allied with Mark Antony but was defeated at the Battle of Actium. This ruler reportedly committed suicide by being bitten by an asp. For the point, name this final Ptolemaic Egyptian pharaoh, noted for her legendary beauty.

ANSWER: Cleopatra VII Philopator