

# Prelim Round 1

## Tossups

(Tossup 1) This body is home to Reiner Gamma, a region of high albedo called a swirl. The South Pole-Aitken basin is an 8-mile-deep impact crater located on this body. Light and dark regions on this body's surface are known as terrae and maria. Every 29 days, this body cycles through waxing and waning phases from "new" to "full." For the point, name this celestial body, Earth's only natural satellite.

ANSWER: Earth's moon (accept Luna)

(Tossup 2) Arthur Okun claimed that an increase in this quantity resulted in a greater decrease in the gross domestic product. Edmund Phelps studied the natural variety of this quantity, which is inversely related to increases in wages by the Phillips Curve. This rate is not increased for certain types of voluntary decisions, such as retirement. For the point, name this economic quantity, the percentage of people in the economy who are out of work.

ANSWER: unemployment rate

(Tossup 3) This empire used a corsair, Dragut, to besiege Malta, which was defended by the Knights Hospitaller. Under Don Juan of Austria, the Holy League decisively defeated this empire off the Gulf of Patras at the Battle of Lepanto. This empire won a 1453 siege against the Byzantine Empire. Sultans like Mehmed II and Suleyman the Magnificent ruled, for the point, what Turkish empire based in Istanbul?

ANSWER: Ottoman Empire

(Tossup 4) This god was the father of Magni with the Jotunn Jarnsaxa [yarn-sack-sah], and is the father of Thrud with a "golden-haired" goddess. This god's chariot was pulled by Tanngrisnir and Tanngrjostr [ton-grees-neer and ton-nyos-ter], a pair of goats, and he was the husband of Sif. During Ragnarök, this god will kill and be killed by the Midgard Serpent. For the point, name this son of Odin, the Norse god of thunder who wielded the hammer Mjolnir [mee-yoll-neer].

ANSWER: Thor (accept Donar)

(Tossup 5) In a novel by this author, a woman uses an onion to climb out of hell and Ivan recites the parable of "The Grand Inquisitor." In another novel, this man created the detective Porfiry Petrovich, who pursues the murderer of the pawnbroker Alyona. Sonya Marmeladovna urges the confession of Raskolnikov, a student who murders a pawnbroker and is sent to Siberia in one of this man's works. For the point, name this Russian author of *The Brothers Karamazov* and *Crime and Punishment*.

ANSWER: Fyodor Mikhailovich Dostoyevsky

(Tossup 6) A warlord from this country ran his own airline, Balkh Air; that man, Abdul Rashid Dostum, ruled from the city of Mazar-i-Sharif and was part of Ahmad Shah Massoud's Northern Alliance in this country. Operation Enduring Freedom targeted this country, which was led from December 2001 to 2014 by Hamid Karzai. For the point, name this country that was ruled by the Taliban until the US invaded following the 9/11 attacks.

ANSWER: Afghanistan

(Tossup 7) When this element is paired with a hydroxyl anion, it forms lye or caustic soda. Two of this element's spectral lines are separated by less than a nanometer and help explain why this element burns bright yellow in a flame test. This element stabilizes a negative charge on glutamate; that pairing is used to give an umami taste to food. For the point, name this element that pairs with chloride in table salt and has atomic symbol Na.

ANSWER: sodium (accept Na before it is read)

(Tossup 8) This musical genre experienced a resurgence in popularity after it was featured in the soundtrack to the 1973 film *The Sting*. This American genre influenced Claude Debussy's piece "Golliwog's Cakewalk." Marches and minstrel shows influenced this genre of music, whose syncopated rhythm is most famously used in "The Entertainer" and a piece partially titled "Maple Leaf." For the point, name this musical genre popularized by Scott Joplin.

ANSWER: ragtime

(Tossup 9) This shape is defined as the set of all points equidistant to a fixed point and a fixed line, called the focus and directrix respectively. Galileo proved that gravity causes a thrown projectile to follow this path, and mirrors in this shape are commonly used in modern satellite dishes. A negative sign in the equation for this graph may indicate it opens in the opposite direction. For the point, name this shape drawn by the graph of  $y$  equals  $x$  squared.

ANSWER: parabola

(Tossup 10) A character in this novel asks Humphrey Marlowe why his teacher would "whip thee for faults of mine" and has kind twin sisters called Bet and Nan. One of the title characters of this novel fills his pockets with nuts and drinks the water meant for cleaning his hands, and the other reveals the location of the royal seal to claim the throne of England after switching places with a commoner. Edward, Prince of Wales and Tom Canty swap places in, for the point, what novel by Mark Twain?

ANSWER: The Prince and the Pauper

(Tossup 11) During this war, William Winder defeated Robert Ross at the Battle of Bladensburg. The Chesapeake-Leopard affair fueled tensions in the build-up to this war and caused Thomas Jefferson to issue the Embargo Act. Dolley Madison saved a copy of the Lansdowne Portrait during this war in which British troops burned Washington D.C. For the point, name this war fought between the United States and the British Empire in the early 19th century.

ANSWER: War of 1812

(Tossup 12) The modern practice of visarjan involves submerging an idol of this deity into a river on his birthday. This god travels on a mouse and his brother is called Kartikeya or Skanda. This god transcribed the Mahabharata as Vyasa dictated it. While this god tried to guard Parvati, Shiva angrily beheaded him and then replaced his head with that of an animal. For the point, name this elephant-headed Hindu god.

ANSWER: Ganapati (accept Ganesha)

(Tossup 13) It has been hotly debated whether this process follows the theory of phyletic gradualism or punctuated equilibrium. Homologous structures are formed through the convergent type of this process. The Galapagos Islands finches are a prime example of this process, which occurs randomly through genetic drift. For the point, name this process that occurs through natural selection, which was first described by Charles Darwin.

ANSWER: evolution (accept natural selection before mentioned; accept speciation)

(Tossup 14) A poem in this form addresses “the master mistress of my passion.” Another of these poems commands “now is the time that face should form another,” and is part of a group of these poems nicknamed “Procreation.” One of these poems addressed to a Fair Youth says “summer’s lease hath all too short a date” and consists of three quatrains and a couplet. “Shall I compare thee to a summer’s day?” is one of, for the point, what fourteen-line poems, many of which were written by Shakespeare?

ANSWER: sonnets by William Shakespeare (accept Shakespearean sonnets; accept Elizabethan sonnets; prompt on “poems by Shakespeare”)

(Tossup 15) Johann Burckhardt excavated a city in this country that served as the home of the Nabataean Kingdom. The south of this country is home to the Jabal Al-Madbah, a mountain that some scholars believe is Mount Sinai as described in the Bible. Petra can be found in this country, which shares its name with a river that connects the Sea of Galilee to the Dead Sea. For the point, name this Middle Eastern country whose capital is Amman.

ANSWER: Jordan

(Tossup 16) This location was the site of a 73 BC battle where forces under Spartacus used vines to flank Gaius Claudius Glaber’s troops. In his *Annals*, Tacitus wrote that the island of Capri enjoyed a beautiful view of the Bay of Naples until this location “burst into flames.” Oplontis was buried in tephra from this mountain during an event that killed Pliny the Elder. The cities of Herculaneum and Pompeii were destroyed by, for the point, the eruption of what Italian volcano?

ANSWER: Mount Vesuvius (accept Monte Vesuvio)

(Tossup 17) The gamma function allows this operation to be applied to numbers other than non-negative integers. This operation applied to  $n$  can be defined recursively as  $n$  times its value for “ $n$  minus 1.” This operation is present in the formula for permutations, and this operation applied to 6 gives 720, which is the product of 6, 5, 4, 3, 2, and 1. For the point, name this mathematical operation that is represented by an exclamation point.

ANSWER: factorial

(Tossup 18) In this novel, the crew of the ship *Demeter* gradually disappear after the ship runs aground near Whitby. This novel's title character keeps three "sisters" in his ancestral home, and purchases several estates in England under the name Count De Ville. In the novel, Lucy Westenra and Mina Murray are targeted by the title Transylvanian count while Jonathan Harker and Abraham Van Helsing try to protect them. For the point, name this novel by Bram Stoker about a title vampire.

ANSWER: Dracula

(Tossup 19) A piano concerto by this man was criticized for its "unevenness of invention" by Nikolai Rubenstein, who may have been its dedicatee. A 5/4 limping waltz can be found in this composer's sixth symphony, which is nicknamed "Pathetique." Von Rothbart is the villainous sorcerer in a work by this composer in which Prince Siegfried falls in love with Odette, who is turned into a bird. For the point, name this Russian composer of *Swan Lake*.

ANSWER: Pyotr Tchaikovsky

(Tossup 20) One type of molecule found in this organelle is damaged by intercalating agents. This organelle is where the histone proteins are located. Tightly bound heterochromatin and loose euchromatin are visible in this organelle under a microscope. This organelle is where transcription occurs and is where a cell's DNA is packaged. For the point, what organelle whose presence defines eukaryotes is the control centre of the cell?

ANSWER: nucleus

(Tossup 21) A controversially undocumented item from this location is known as the Head from the Lotus Bloom. This location, which included artistic depictions of the Opening of the Mouth ceremony conducted by Ay, was discovered in the 1920s with the financial support of Lord Carnarvon. KV62 is the serial number for this location in the Valley of the Kings. Howard Carter re-discovered, for the point, what final resting place of a boy pharaoh of Egypt?

ANSWER: the tomb (or burial place, etc.) of King Tutankhamun (or Tutankhaten)

(Tossup 22) This man's government alleged that the CIA hired a lumberjack in 2017 to try to assassinate him. While visiting this man's country, a University of Virginia student named Otto Warmbier was arrested in 2016. In a controversial video, "Happy Birthday" is sung to this man by Dennis Rodman, who has taken numerous diplomatic trips to visit him. Donald Trump has referred to this world leader as "rocket man" for his constant threats to use nuclear weaponry. For the point, name this current leader of North Korea.

ANSWER: Kim Jong-Un (prompt on Kim)

(Tossup 23) One character who drinks "victory gin" in this novel buys a coral paperweight from Mr Charrington's antiques shop. Citizens in this novel berate Emmanuel Goldstein and are expected to embrace the principles of Newspeak and doublethink. A cage of rats is used by O'Brien in Room 101 to torture a man who betrays his love for Julia. For the point, Winston Smith admits that he loves Big Brother at the end of what novel by George Orwell?

ANSWER: Nineteen Eighty-Four

(Tossup 24) Some inefficiency in the Stirling engine occurs because this quantity does not change when the gas is in contact with either reservoir. Processes in which this quantity does not change are isochoric. According to Boyle's Law, this quantity is inversely proportional to pressure. Density is measured as mass divided by, for the point, what physical quantity whose SI unit is the cubic meter, describing how much space is occupied by matter?

ANSWER: volume (accept molar volume)

(Tossup 25) This man's first wife circumcised their son, Gershom, and threw the foreskin at this man's feet. This son of Jochebed and Amram married Zipporah after fleeing to Midian to escape punishment for murder. This man's brother Aaron created the Golden Calf while this man led the Hebrews after they escaped slavery in Egypt. For the point, name this Biblical figure who received the Ten Commandments.

ANSWER: Moses (accept Moshe; accept Musa)

(Tossup 26) In the top left of this painting, a church steeple barely pokes out among a grove of trees. A central figure in this painting was modeled by the artist's sister, Nan, who was unhappy with the interpretation that she was married to the man in this painting's foreground. The Dibble House in Iowa inspired the strangely ornate window on the white farmhouse in this painting's background. For the point, name this painting by Grant Wood that shows a woman next to an old man with a pitchfork.

ANSWER: American Gothic

(Tossup 27) A character in this short story is enraged by an object that is "a dull blue, with a hideous veil" that chills "the very marrow of [his] bones." The narrator of this short story carefully opens a lantern for eight nights so that its beam falls upon a "vulture eye," and hears a sound like a "watch enveloped in cotton" after smothering a man with a mattress. For the point, name this story in which the title organ seems to beat under the floorboards of a murderer's home, written by Edgar Allan Poe.

ANSWER: The Tell-Tale Heart

(Tossup 28) An island surrounded by this substance is known as a kipuka. This natural substance formed the traps on the Deccan and Siberian plateaus. The "pillow" form of this substance is found underwater, and this substance can be classified by its smoothness as either a'a [ah-ah] or pahoehoe [paw-hoey-hoey]. This substance helps form shield, strato, and cinder cone shapes when it hardens into igneous rock. For the point, name this molten rock that is classified as magma when under the Earth's surface.

ANSWER: lava (do not accept or prompt on magma)

(Tossup 29) A mountain range along this body of water was named by the Ojibwa people for their resemblance to the shape of a porcupine. This body of water, which is drained by the St. Mary's River, is home to Windigo, a fueling port on this lake's Isle Royale. Thunder Bay lies on this lake, which forms the northern border of the Upper Peninsula in Michigan. For the point, name this largest of the Great Lakes.

ANSWER: Lake Superior

(Tossup 30) At the 1956 Democratic National Convention, this man gave the nominating speech for Adlai Stevenson. In one speech, this politician stated that we choose to “do the other things, not because they are easy, but because they are hard.” While in Germany, this man stated “I am a citizen of Berlin” despite claims he referred to himself as a jelly doughnut. For the point, name this President who said “ask what you can do for your country” during his 1961 inauguration.

ANSWER: John Fitzgerald Kennedy (accept JFK)

## Replacements

(Tossup 31) The Phoenecian one of these systems used matres lectionis and 22 symbols, and was preceded by pictographic systems like cuneiform. These systems include a Hebrew one whose Nun, Gimel, Hei, and Shin entries decorate dreidels. In these systems, each phoneme of a language is represented by a single letter, as in the Cyrillic one of these. For the point, name this type of writing system, which in English has 26 letters from A to Z.

ANSWER: alphabets