

2019 Boston Latin Invitational Scholastic Series (BLISS) I Round 7

Head Edited by Christy Jestin and Nicholas Weiske; Literature Edited by Kelin Carpenter; Written by Lucas Aho, Samuel Cheever, Kyler Hoogendorn Ecker, Aidan Goldberg, Jerry Han, Christy Jestin, David Liu, Kevin S. Qi, Sebastian Suarez, Joseph Terrey, Austin Wang, Nicholas Weiske, Alice Wu, Lily Yang, and Alex Young

Tossups

1. **This man once said “It is well that war is so terrible, or we should grow too fond of it.” This West Point graduate served in the Mexican-American War and helped win the Battle of Cerro Gordo by finding a secret passageway. His plans were foiled when a Union soldier found a lost cigar with battle plans inside at Antietam. He directed the assault on (*) Harpers Ferry against radical abolitionist John Brown. This man surrendered after a failed last ditch attack at Appomattox Court House in 1865. For 10 points, name this Southern general and commander of Confederate forces during the Civil War.**

Answer: **Robert E. Lee**

2. **In a reference to the play which inspired him, this thinker had subjects called cyranoids repeat words given to them by a third party in a conversation. Another experiment asked people in Omaha and Wichita to send a letter with directions to keep forwarding it until it reached Boston. This man’s (*) small world experiment demonstrated only “six degrees of separation”. His most famous experiment included “teachers” who followed the prompt “It is absolutely essential that you continue” to administer fake lethal shock. For 10 points, name this Yale researcher who conducted a namesake obedience experiment.**

Answer: **Stanley Milgram**

3. **Harper Lee helped this author compile information on a quadruple murder in Holcomb, Kansas. One novel by this author begins in a Brownstone apartment building, where the narrator is watched by the protagonist. That character believes that because he does not like baseball or horse racing, (*) Rusty Trawler must be gay. Holly Golightly delivers weather reports to Sally Tomato and the murder of the Clutter Family is detailed in works by this writer. For 10 points, name this author of “In Cold Blood” and “Breakfast at Tiffany’s”.**

Answer: **Truman Capote**

4. **Foucault proposed using the precession of one of these devices by the Coriolis Effect to prove the Earth’s rotation. Small angle approximation allows these devices to be considered harmonic oscillators with frequency equal to the square root of (*) g over length. The double variety of these device exhibits chaotic motion. Newton’s cradles and grandfather clocks are common examples of these devices. For 10 points, name these devices which consist of weights on string.**

Answer: **pendulums** (accept specific varieties; prompt on **harmonic oscillators** until compound)

5. **A movie named “Stealing [this man]” documents the theft of this man’s art in Santiago. Another piece was stolen in 1988 after 3 guardsmen were handcuffed and again in 2015. That piece, rejected by the Salon for being too ugly, was the *Man with a Broken Nose*. This man also showed the title six lords about to (*) hang in *Burghers of Calais*. This man was accused of casting a live model for *The Age of Bronze*. This man included Paolo and Francesco in *The Kiss* of one work while his most famous shows a man with his head on his hand. For 10 points, name this French sculptor of *Gates of Hell* and *The Thinker*.**

Answer: **Auguste Rodin**

6. **This river's drainage basin is the largest in the world, and it was formed after the recession of the Champlain Sea about 6,000 years ago. Its major tributary, the Saguenay River, is the location of the only navigable fjord in North America as well as a large population of beluga whales. This river's (*) gulf is the largest in the world. It is the primary outflow of the Great Lakes, and this river's namesake Seaway connects the Atlantic Ocean to the Great Lakes. For 10 points, name this Canadian River that passes through Montreal and Quebec.**

Answer: **St. Lawrence River**

7. **The Eider river was chosen as the border between this man's empire and that of King Hemming of Denmark in the Treaty of Heiligen. Eric of Friuli was slain by Viseslav at the battle of Trsat (tuhr-Sat), which was a crushing defeat for this man, who himself defeated invading Avars and Tassilo of Bavaria. Pope (*) Leo III crowned him emperor on Christmas Day in Aachen Cathedral. This man's grandfather was Charles Martel, and he shared the territory of his father Pepin the Short with his brother Carloman. For 10 points, name this Carolingian ruler who founded the Holy Roman Empire.**

Answer: **Charlemagne** or **Charles I** or **Charles the Great** (or **Karl der Große**; prompt on partial answer)

8. **The sedimentation rate, rather than size, of these organelles is most commonly measured in Svedberg units. These organelles are about 10 Svedberg units faster on average in eukaryotes than in prokaryotes. These organelles are made up of two subunits, each with its own function. These organelles have their own namesake (*) RNA, which comprises about 60% of their mass. These organelles are the site of protein translation. For 10 points, name these organelles that cover rough endoplasmic reticulum.**

Answer: **ribosomes**

9. **Thomas Hardy's *The Return of the Native* inspired this composer's tone poem "Egdon Heath." This man set several hymns from the Rig Veda to music, and a Kalidasa work inspired this composer's *The Cloud Messenger*. This composer combined "Dargason" and "Greensleeves" in his *Second Suite in F and St. (*) Paul's Suite*. String instruments playing col legno (kohl lay-nyo) or with wood are part of the 5/4 ostinato introduction of one movement titled "Mars, Bringer of War". This man's most famous work has sections like "The Mystic" and movements like Neptune. For 10 points, name this British composer of *The Planets*.**

Answer: **Gustav Holst**

10. **The protagonist of this novel fears she is becoming a lesbian after reading *The Well of Loneliness*. Mrs. Cullinan insists upon calling this novel's narrator "Mary" and in her anger she breaks the Cullinans' china. After Mr. Donleavy gives a racist speech, Henry Reed leads an uplifting chorus. Mrs. (*) Bertha Flowers helps the narrator with her trauma after being raped by Mr. Freeman, and her brother Bailey advises her to keep her pregnancy secret. Vivian and Daddy Clidell support the narrator as she moves from Stamps, Arkansas, to San Francisco. For 10 points, name this memoir by Maya Angelou.**

Answer: **I Know Why the Caged Bird Sings**

11. **Medon and his father Codrus were the last kings of this city. One of this city's rulers was born when Hephaestes ejaculated on the ground while another was given in a box to three sisters by Athena. Medea came to this city and tried to poison the king's unknown son. That son was later usurped by the demagogue Menestheus, and he came to this city after defeating (*) Sinis, Cercyon, and Procrustes among others. While returning from the island of Crete, that man forgets to change the sails from black to red, prompting the suicide of his father Aegeus. For 10 points, Theseus ruled what city named for the Greek goddess of wisdom.**

Answer: Athens

12. **This element bonded to a proton or an H⁺ (read as “H-plus”) ion forms the strongest acid when measured by proton affinity. Below its lambda point, this element forms a superfluid which can creep up the sides of containers. The nucleus of this element is identical to an (*) alpha particle.** This element is the second most abundant in the universe and is formed in stars by the fusion of hydrogen. This element has largely replaced hydrogen in balloons due to its relative inertness as the lightest noble gas. For 10 points, name this second element of the periodic table, with symbol He (read as “H-E”).

Answer: helium (do not accept helium-3 after superfluid; accept He before mention)

13. **On the Hopewell, this explorer reached Greenland, and he found a large colony of whales near Spitsbergen. He explored the American East Coast on board another ship. While on a journey sponsored by the Virginia Company and British East India Company this man lost his life after a mutiny. He reached (*) Albany while exploring a namesake river in New York.** The Muscovy Company sponsored his trip to find the Northwest Passage to China. For 10 points, name this English explorer and captain of the Half Moon who is the namesake of a bay in northeast Canada.

Answer: Henry Hudson

14. **In this author’s most famous novel, one character “choked his little self”. A play by this author opened with the murder of Maureen Lyon and was originally made for radio with the title *Three Blind Mice*. That work was dedicated to Queen Mary. A snowdrift stops the procession of the protagonist in a story by this author. In that same novel, (*) Ratchett is killed after a stop in Belgrade, and the kidnapper of three year old Daisy Armstrong is killed.** For 10 points, name this mystery author who wrote about the detective Hercule Poirot in *Murder on the Orient Express*.

Answer: Agatha Christie

15. **This man’s *Symphony in C* borrows heavily from Gounod’s *Symphony in D*. In a work by this man set in Ceylon, Leila is a Brahman priestess sought by two friends. Nadir and Zurga sing “Au fond du temple saint” or the “Friendship Duet” in this composer’s *The Pearl Fishers*. Zuniga issues an arrest order near a (*) cigarette factory in his most famous work. In that work, the “Toreador Song” is sung by Escamillo, but the title seductress is stabbed by Don Jose in the bullfighting ring. That gypsy sings a habanera.** For 10 points, name this French composer of the opera *Carmen*.

Answer: Georges Bizet

16. **A representative of this organization said it was “as if a bomb had dropped” while describing the aftermath of the Boston Marathon bombing. A person working for this company was ridiculed for holding up a sign with racial slurs and a Confederate Flag while asking “does this offend you.” That person is (*) Don Lemon.** This network sued President Donald Trump after he revoked Jim Acosta’s press pass, alleging his first amendment rights had been violated. For 10 points, name this 24-hour news network with personalities like Fareed Zakaria, Anderson Cooper, and Wolf Blitzer.

Answer: CNN or Cable News Network

17. **This man created the solidus to reduce inflation. He had his son killed after Fausta claimed that son raped him. After defeating Licinius at Chrysopolis, this man reunited the Roman Empire. He defeated one rival near Rome after seeing the phrase “In this sign you will conquer” in the sky. This ruler had earlier married off his sister to Licinius to enforce the (*) Edict of Milan.** This emperor of Rome ended the Tetrarchy and called the First Council of Nicaea. For 10 points, name this victor at the Battle of the Milvian Bridge and first Christian Roman Emperor.

Answer: Constantine I or Constantine the Great (prompt on partial answer)

18. **The protagonist of this work becomes very angry after being told that his “heart is blind” and again after hearing the question “Do you really live with the thought that when you die, you die, and nothing remains?” That question was posed by the Chaplain. Another character kicks his dog with scabs. That man Salamano testifies at a trial along with (*) Marie.** The protagonist is friends with the pimp Raymond Sintes, and he does not react to his mother’s death in the beginning of this work. An Arab is shot five times by Meursault (Mer-soh) in this book set in Algeria. For 10 points, name this novel by Albert Camus (al-Bayr ka-Moo).

Answer: *The Stranger* (or *L’Étranger*)

19. **This number raised to pi times the square root of 163 is called Ramanujan's constant, which is very close to an integer. The sum of all reciprocal factorials is this equal to this number. This number raised to (*) pi times i is equal to negative one.** In order to calculate the amount of money after a period of continuous compound interest, you multiply the initial amount by this number raised to the time in years multiplied by the rate of interest. The base of a natural logarithm is this number. For 10 points, name this irrational number which is roughly equal to 2.718.

Answer: e or Euler’s number (do not accept or prompt on Euler’s constant)

20. **This state’s pari form refers to the death of one who is in this state. Jains achieve this when they change from arhats into siddhas. This concept is mentioned in the Bhagavad Gita and is the unification with the Brahman in Hinduism. Though not (*) moksha, this state meaning “blowing out” is a release from samsara. Bodhisattvas help adherents can achieve this state by following the Eightfold Path and embracing the Four Noble Truths. Siddhartha Gautama entered this state after achieving enlightenment while sitting under the Bodhi tree.** For 10 points, name this final goal of Buddhism.

Answer: nirvana

21. **While covering this song, Elmo comments that he’s never been to the title location though he wishes he was there right now, and he later sings a soulful drum fill. Jason Derulo starts singing this song’s chorus, before admitting that he’d “fight for you.” Another band’s cover resulted from a (*) Twitter username directly asking them to, reading “Weezer cover [this song]”. That cover remained on Billboard’s Hot 100 for at least four weeks, and their music video has over seven million views. This song’s lyrics comment that the singer is “going take some time to do the things we never had”.** For 10 points, name this hit song by Toto.

Answer: “Africa”

Bonuses

1. Answer the following questions about Henry Wadsworth Longfellow. For 10 points each:

a. This poem dramatizes the “midnight ride” of a Boston-born silversmith.

Answer: **“Paul Revere’s Ride”**

b. Longfellow wrote about this Acadian woman in a namesake work. This woman searches for her lost love, Gabriel, as she travels through the landscapes of America.

Answer: **Evangeline**

c. Longfellow was the first American to provide a complete translation of this famed Italian long narrative poem by Dante, often considered to be among the greatest works in world literature

Answer: **The Divine Comedy** (anti-prompt on **Inferno**, **Purgatorio** or **Paradiso**)

2. Answer some questions about purchases of territory by the United States. For 10 points each:

a. This purchase from Mexico bought land for New Mexico and Arizona in order to build a southern railroad to California.

Answer: **Gadsden Purchase**

b. This purchase from Russia was known as “Seward’s folly” despite its nominal cost until the Klondike Gold Rush proved otherwise.

Answer: **Purchase of Alaska**

c. This purchase from France resulted in disputed borders because of ambiguity in the Third Treaty of San Ildefonso. It was negotiated by Robert Livingston.

Answer: **Louisiana Purchase**

3. This man created an equestrian statue of Erasmo da Narni nicknamed *Gattamelata*. For 10 points each:

a. Name this Renaissance sculptor of *St. Mark* and *Mary Magdalene*.

Answer: **Donatello**

b. This bronze statue by Donatello was the first free standing since Roman times and shows the title figure wearing a hat and boots over the head of Goliath.

Answer: **David**

c. Donatello supposedly yelled “speak, damn you, speak!” at this very realistic marble statue of a biblical prophet. Its nickname means pumpkin but refers to the title figure’s bald head.

Answer: **Zuccone** or **Habakkuk**

4. Answer these questions about the feats of Maui (Mow-ee). For 10 points each:

a. This favorite tool of Maui was used to pull up the ocean floor and create islands including New Zealand’s North Island and Hawaii.

Answer: **fish hook** (or **Manaiakalani**)

b. Maui slowed down this figure by following his grandmother’s advice and laying traps for this figure’s many legs. In Chinese myth, Hou Yi shot down 9 out of 10 of these figures, leaving only the one we know today.

Answer: **the Sun**

c. Maui died trying to gain immortality for mankind by reversing the cycle of life and crawling from his ancestress’ vagina to this body part. Unfortunately she killed him when Maui’s brother accidentally woke her with this body part as he began his climb.

Answer: **mouth** (Maui was killed by the obsidian teeth near his ancestress’ vagina when his brother laughed; ironically he was actually the first person to die, ensuring the mortality of all humans)

5. The HR diagram! For 10 points each:

- a. The Hertzsprung-Russell diagram sometimes features temperature on one of the x-axes. This quantity, which is equivalent to power, is on the y-axis.

Answer: **luminosity**

- b. These objects lie in the upper right of the HR diagram. Their names come from the fact that the radii of these objects can be hundreds of times larger than the Sun.

Answer: **giant stars** (anti-prompt on **red**, **blue**, **white** or **yellow giants**; anti-prompt on **hypergiants** or **supergiants**; do not accept or prompt on **subgiants**)

- c. This group of stars extends from the upper left to the bottom right of the HR diagram. These are sometimes called dwarf stars and are far more numerous than the giants.

Answer: **main-sequence stars**

6. The Danube River flows through four European capitals. For 10 points each:

- a. This capital city of Serbia was razed forty four times and was the capital of Yugoslavia. It is centered at the confluence of the Danube and Sava Rivers.

Answer: **Belgrade** or **Beograd**

- b. This capital city of Hungary was formed by the unification of two namesake cities on either side of the river by the Chain Bridge.

Answer: **Budapest**

- c. This capital city of Slovakia houses a namesake castle and the Danubiana Meulensteen Art Museum.

Answer: **Bratislava** (or **Pressburg** or **Pozsony** (paw-zohn-yuh))

7. In this play, a lower class London flower girl is taught proper English. For 10 points each:

- a. Name this play in which Henry Higgins makes a bet with Colonel Pickering that he can teach Eliza to speak like a proper lady.

Answer: **Pygmalion**

- b. Name this father of Eliza who demands 5 pounds from Higgins for custody over his daughter.

Answer: **Alfred Doolittle**

- c. This playwright wrote *Pygmalion*.

Answer: **George Bernard Shaw**

8. The hijra was a major turning point in the history of Islam. For 10 points each:

- a. Muhammad started the hijra from this city. This city is the holiest city in Islam and the Prophet's birthplace.

Answer: **Muhammad**

- b. The hijra was a journey to this second holiest city of Islam after Mecca.

Answer: **Medina** or **Yathrib**

- c. Medina also names a group of these chapters of the Qur'an revealed after the hijra. These chapters are made up of lines called ayahs, and the longest one is Al-Baqarah or the Cow.

Answer: **surahs**

9. Answer the following questions about Greek conflicts with Persia. For 10 points each:

- a. Spartan forces were late to this battle despite Pheidippides' warning. The Athenians defeated Darius I with support from the Plataeans at this battle in 490 BC.

Answer: **Marathon**

- b. This king of Macedon prepared an invasion of Persia after conquering Greece but died before he could execute his plans.

Answer: **Philip II**

- c. Alexander the Great built a massive causeway to assault and siege this Phoenician city.

Answer: **Tyre**

10. The BIG3 professional 3-on-3 basketball league has been doing great things for retired NBA players. For 10 points each:

- a. Name this founder of the BIG3, a rap artist formerly of N.W.A. This man was portrayed by his son in the movie *Straight Outta Compton*.

Answer: **Ice Cube** or **O'Shea Jackson Sr.**

- b. The BIG3 team Ball Hogs is captained by this former player of the Boston Celtics and Chicago Bulls, also known as the White Mamba. He famously said there's nothing hard about not playing at all in the NBA Finals because he could tell his kids he was the Finals MVP thirty years later.

Answer: **Brian David Scalabrino**

- c. This player for the 3-Headed Monsters is a three point specialist formerly of the Denver Nuggets. In 1990s, this Muslim player was blackballed for not standing and praying during the national anthem.

Answer: **Mahmoud Abdul-Rauf** or **Chris Jackson**

11. This disabled 33-year-old observes the collapse of his family in a "stream of consciousness" novel. For 10 points each:

- a. This Compson family member is disappointed when his sister Dilsey leaves to get married.

Answer: **Benjamin "Benjy" Compson** (accept either)

- b. Quentin jumps into this river to end his life while attending Harvard in Massachusetts. This river separates Cambridge and Boston.

Answer: **Charles River**

- c. Quentin and Benjy are from *The Sound and the Fury* by this American author.

Answer: **William Faulkner**

12. Answer some questions about the galvanic cell. For 10 points each:

- a. While oxidation occurs at the anode, this process occurs at the cathode.

Answer: **reduction**

- b. Without this part of the cell, the measured voltage would quickly spike and then drop back to zero. It functions to restore ions to each half cell.

Answer: **salt bridge**

- c. This equation can be used to calculate the reduction potential of the electrochemical reaction.

Answer: **Nernst Equation**

13. We'll all decay one day. For 10 points each:

- a. Name this type of decay in which a proton is converted to a neutron or vice versa. This type of decay, which is named for the second letter of the Greek alphabet, produces an electron or a positron.

Answer: **beta decay**

- b. Beta decay also emits these uncharged fermions with very little mass.

Answer: **neutrinos**

- c. Beta decay is driven by these weak bosons which come in positively and negatively charged varieties. These bosons are contrasted with the neutral Z bosons.

Answer: **W bosons**

14. This nation's independence was won from the Netherlands in 1949. For 10 points each:

- a. This Southeast Asian country defeated the Dutch under the PKI and established an independent nation with its capital in Jakarta.

Answer: **Indonesia**

- b. This Indonesian national hero proclaimed the country's independence in 1945 along with Mohammad Hatta, who became his Vice President under an autocratic "Guided Democracy".

Answer: **Sukarno** or **(Kusno Sosrodihardjo)**

- c. This small former Portuguese nation with capital at Dili obtained independence from Indonesia after a 1999 referendum.

Answer: **East Timor** or **Timor-Leste**

15. This play ends with the death of the servant Firs. For 10 points each:

- a. Nina loves Trigorin, and Lopakhin buys Madame Renavskaya's childhood estate in what play?

Answer: **The Cherry Orchard**

- b. *The Cherry Orchard* is by this Russian playwright of *The Seagull*.

Answer: **Anton Chekhov**

- c. This Chekhov play is based on *The Wood Demon*. The title character of this play unsuccessfully tries to shoot Professor Serebryakov twice.

Answer: **Uncle Vanya**

16. This thinker wrote the phrase "colorless green ideas sleep furiously". For 10 points each:

- a. Name this MIT professor who wrote *Syntactic Structures*.

Answer: **Noam Chomsky**

- b. Chomsky studies this field of social science which deals with language.

Answer: **linguistics**

- c. Chomsky has argued for this concept which opposes Skinner's ideas. This idea suggests that children don't hear enough words to really learn language, and it supports a universal grammar.

Answer: **poverty of the stimulus**

17. This composer based one part of *Music for Strings, Percussion, and Celesta* on the Fibonacci sequence. For 10 points each:

- a. Name this composer of *Concerto for Orchestra* and *The Miraculous Mandarin*.

Answer: **Bela Bartok**

- b. Bartok worked with Zoltan Kodaly to collect folk tunes from this home country. His symphonic poem *Kossuth* celebrated this country's nationalism movement.

Answer: **Hungary**

- c. Bartok also composed this set of 153 piano pieces as a teaching piece. The pieces of this suite become progressively harder.

Answer: **Mikrokosmos Suite**

18. Pencil and paper ready. You will have 10 seconds per bonus. Consider a cube with side length 6 inches. For 10 points each:

- a. What is the total volume of the cube?

Answer: **216 in.³** or **two hundred and sixteen cubic inches** [$V=s^3=6^3=216$ or $V=lwh=6\cdot6\cdot6=216$]

- b. What is the length of each of the cube's space diagonals?

Answer: **6√3 in.** or **six square root (of) three inches** [$\sqrt{(6^2+6^2+6^2)}=6\sqrt{3}$]

- c. (read very slowly) Consider any two adjacent faces of the cube and their six vertices. Find the volume of the solid formed by connecting the cube's center to each of the six vertices. Consider dividing the solid into pieces or viewing the solid as a fraction of the cube.

Answer: **72 in.³** or **seventy-two cubic inches** [1: The solid is two square pyramids each with bases of area $36 (6^2) \text{ in.}^2$ and height $3 (6/2=3) \text{ in.}$; $V=Bh/3=36$; multiplying by two: $2 \cdot 36=72$

2: Putting together three such solids each with a different pair of faces will result in a full cube so each must have volume $1/3$ of the total cube; volume would be same even if faces were non-adjacent by logic of number 1, and this is easier to visualize the fraction if the pyramid pairs are on each of the three axes]

19. Global warming fueled an increase in severe storms around the world in September 2018. For 10 points each:

- a. This hurricane ravaged the Carolinas and caused widespread flooding.

Answer: **Hurricane Florence**

- b. This hurricane caused power outages and many deaths in Puerto Rico. The situation was worsened by a lack of relief funding.

Answer: **Hurricane Maria**

This typhoon affected the Philippines, Guam, and southern China.

Answer: **Typhoon Mangkhut** or **Typhoon Ompong**

20. Answer these questions about the immune system. For 10 points each:

- a. This color blood cell is a major part of the immune system. These cells are known as leukocytes.

Answer: **white blood cells**

- b. This type of white blood cell is filled with basophils. These cells release histamine causing inflammation.

Answer: **mast cells**

- c. These collections or glycoproteins are used by the body to recognize self and non self cells. These entities which come in Class I and Class II are part of cell membranes in the body.

Answer: **MHC** or **major histocompatibility complexes**

21. This man allegedly stole a pig from a farmer named Ah Fook. He was captured after an 1880 shootout in Glenrowan and executed in Old Melbourne Gaol (Gayl). For 10 points each:

- a. This Australian outlaw, who wore an improvised suit of armor in his last stand against police.

Answer: **Ned Kelly**

- b. These outlaws hid from law enforcement in the Australian Outback and robbed both travelers and banks. Ned Kelly was the most famous of these people.

Answer: **bushrangers**

- c. Kelly's father was of one of these people, who were transported on ships to New South Wales by the British government. In *Great Expectations*, Abel Magwitch is one of these people.

Answer: **prisoners in penal colonies** or **prisoners transported to Australia** (accept appropriate descriptions and obvious equivalents)