Bergen Academies Spring Quizbowl Tournament II [BASQT II]

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Round 7: Tossups

1. In work by this man, the title character was sacrificed to Artemis in order to allow the King's troops to sail to battle. In that work, *Iphigenia in Aulis*, Menelaus feels betrayed that Agamemnon was hesitant of the sacrifice despite the fact that Menelaus's wife ran off to Troy. This playwright utilizes theme of (*) vengeance in a play where the title character plans the murder of Glauce and Creon. Dionysus drives all the women in Thebes into madness including his aunts in order to defend his mother's death in this playwright's work. For ten points, name this Greek tragedian of *Medea* and *The Bacchae*.

ANSWER: Euripides

2. Cheddar Gorge on this island is the site of its oldest human fossil, which was found next to continental animals such as the brown bear. Julius Caesar appointed the king of the Trinovantes on this island, while the neighboring Eceni tribe repelled invasions under its queen (*) Boudica. Constantine the Great became Augustus in Northumbria on this island, and the northern extent of Roman control is marked by Hadrian's Wall. For ten points, to what island did the Anglo-Saxons introduce what would become the English language?

ANSWER: Great **Britain** (do not accept or prompt on "England")

3. Daniel Kahneman has studied how one form of this variable unduly influences decision-making, and the combination of U-shaped curves in its short-run average give a U-shaped curve for its long-run average. Those analyses assume that its (*) fixed version is avoidable and thus zero. A firm should shut down when price drops below the average variable form of this quantity, and price is coincident with its average and marginal curves. The value of a 'next-best option' is the opportunity form of this quantity. For ten points, give this economic term which can represent the price of a good to a consumer.

ANSWER: **cost** (accept sunk **cost** only before "U-shaped")

4. Larry Rivers removed this object from his version of a 19th century painting. One artist who created reproductions of this object painted over collage of newspaper with encaustic. In a photograph, Joe Rosenthal showed this object prominently on the island of (*) Iwo Jima, where it is being raised by four soldiers. It is held by a man in a fur hat and James Monroe in one painting by Emanuel Leutze, and Jasper Johns created several large scale versions of it. For ten points, name this symbolic object, the first of which was said to be stitched by Betsy Ross.

ANSWER: the American flag or flag of the United States (prompt on nicknames or just "flag")

5. In one work by this author, Henry Clinton is on the Citizens' Council to compensate for his lowly upbringing, and another character reads the pamphlet "The Black Plague". This author introduced the characters Alexandra Hancock, Bob (*) Ewell, and Dill Harris, and she would later work with Truman Capote on his book *In Cold Blood*. This author wrote about Maycomb, Alabama's inhabitants Scout and Atticus Finch. For ten points, name this author of only two published works, *Go Set a Watchman* and *To Kill a Mockingbird*, who died in 2016.

ANSWER: (Nelle) Harper Lee

6. This phenomenon was the subject of the 1999 Nobel Prize in Physics, awarded to Gerard 't Hooft, who developed renormalization in Yang-Mills theory to study it. This phenomenon was experimentally supported by the detection of neutral currents at the Gargamelle (*) bubble chamber after a beam of muon neutrinos interacted with a gauge boson. At above 10¹⁵ Kelvin, this interaction merges with electromagnetism, and it is carried by the W and Z bosons. For ten points, what fundamental force is responsible for radioactive decay and is contrasted with the strong force?

ANSWER: weak nuclear force (or weak interaction)

7. One member of this family was executed in October 2016, when a prince was convicted of murdering his uncle. Diriyah became the center of this family's first state when its founder formed a religious alliance with Muhammad ibn Abdul (*) Wahhab. Women were given the right to vote by Abdullah of this family, while his successor Salman oversaw intervention in the Yemeni Civil War. The "Custodian of the Two Holy Mosques" is the head of – for ten points – what royal family, the namesake of the Arab country it rules from Riyadh?

ANSWER: Al Saud (or the House of Saud; accept "Saud royal family" or equivalents)

8. The overture to this work begins with strings and bassoon playing runs before the oboes enter. The title character measures the space for his bridal bed in the duet Cinque, dieci, venti in the beginning of this opera with Susanna, and describes a life in the military to Cherubino in the aria (*) Non piu andrai. In this opera, Count Almaviva attempts to exercise his droit du seigneur in order to sleep with Susanna. For ten points, name this opera, in which the title character is wed on a "day of madness" by Wolfgang Amadeus Mozart.

ANSWER: The Marriage of Figaro (accept Le nozze di Figaro)

9. People born in this animal's year of the Chinese Zodiac are said to be shy and creative. On Yom Kippur, Jewish communities would historically sacrifice one of these animals and let another escape into the wilderness, symbolically carrying away the communities' sins. (*) Tanngrisnir and Tanngnjostr were two of these animals slaughtered everyday for meat and reborn to pull Thor's chariot. The head of one of these animals arises from the back of the Chimera. Men with the legs of these animals were called satyrs. For ten points, name these animals associated with Satan and sheep.

ANSWER: Goats or Capra aegagrus hircus

10. In a speech delivered on July 4, 1939, this man praised executive Ed Barrow and "smart student of psychology" Joe McCarthy. That event honoring this man was attended by dignitaries including Fiorello La Guardia and the "Murderer's Row". This first baseman played in a then-record 2,130 consecutive games, contributing to his nickname (*) "Iron Horse". His jersey number, 4, was the first to be retired by a professional baseball team, and he was the subject of the film *The Pride of the Yankees*. For ten points, name this baseball player and "luckiest man on the face of the earth" who brought ALS to the public consciousness.

ANSWER: Henry Louis "Lou" Gehrig

11. Yellow PostBuses are operated by this country's mail service from its capital, which is home to the Marzilibahn funicular. The A2 motorway in this country runs through the Sonnenberg Tunnel, at its completion the world's largest fallout shelter. The 57-kilometer Gotthard Base Tunnel in this country is the world's longest and deepest traffic tunnel, and lies below the (*) Romansh-speaking Surselva Valley. That tunnel connects the Uri and Ticino cantons. Another infrastructure project in this country is the Seujet Dam on Lake Geneva. Zurich Airport services – for ten points – what Alpine country?

ANSWER: Switzerland or the Swiss Confederation

12. Two women stand in front of a canal in one of this man's depictions of a city also seen in *The Little Street*. This artist was known for utilizing expensive pigments, including lead-tin yellow, in a work featuring a woman looking at the viewer as she writes a letter. A foot warmer and a tile depicting (*) Cupid sits directly behind the subject of one of his paintings, who is pouring milk directly into a clay basin. Light shines upon the subject casting a shadow in one of his most notable works, where the subject is wearing a headscarf and the title object. For ten points, name this artist of *The Milkmaid* and *Girl with a Pearl Earring*.

ANSWER: Johannes Vermeer

13. In 1864, John Chivington's cavalry killed Cheyenne leader Black Kettle at Sand Creek in this state. Katharine Lee Bates composed "America the Beautiful" after a visit to this state. It comprised the majority of the (*) Jefferson Territory, and significant mining towns in this state include Cripple Creek and Leadville. "Fifty-niners" convened in this state under the rallying-cry "Pike's Peak or bust!" This state is the site of the U.S. Air Force Academy, and has the highest average elevation. For ten points, name this "Centennial" state with capital at Denver.

ANSWER: Colorado

14. This scientist developed a theory of beams with Daniel Bernoulli, and was the first to use the notation f(x) [f of x]. He solved the Basel problem, which asks for the sum of the reciprocals of the squares. One theorem developed by this man is a generalization to Fermat's little theorem and involves a raised to the result of his (*) totient function. He proved that the number of vertices minus edges plus faces is equal to 2, while his study of the bridges of Königsberg led to the development of graph theory. For ten points, what Swiss mathematician is the namesake of the base of the natural logarithm, e?

ANSWER: Leonhard **Euler**

15. "The Tragedy of Gorboduc" was the first play recorded to have been performed in this nation. A play about two men discussing emigration from this country, "Philidephia, Here I Come", was written by an author referred to as this nation's Chekhov. The (*) French language works of one of this country's dramatists include one where Estragon can't remove his boots. That author, Samuel Beckett, helped assist in the research for *Finnegans Wake*, a novel by another author from this country. For ten points, name this country, the setting of James Joyce's *Dubliners*.

ANSWER: Ireland or Éire

16. Alongside his brother, this man arranged the Treaty of Margus with Romans involving the return of nobles who disagreed with his rule. This man advanced into the Balkans after the defeat of magister militum Arnegisclus at the Battle of the Utus. He then returned to Rome to claim his marriage to Honoria, the sister of Emperor Valentinian III. This man was convinced not to (*) sack Rome by Pope Leo I after hearing the fate of Alaric I of the Visigoths, who sacked Rome in 410 AD shortly before perishing. For ten points, name this leader of the Hunnic empire, nicknamed the "Scourge of God".

ANSWER: Attila the Hun (prompt on "scourge of God" before mention)

17. A city held captive in this work is liberated after Baligant's death, and the death of Alde's beloved precipitates her own. Pinabel and Thierry duel to determine who is right, and the army of King Marsil is defeated to free the city of (*) Saragossa. The Saracens learn the protagonist's army's battle plan from the traitorous Ganelon, and that protagonist is joined by Turpin and Oliver. The title character alerts Charlemagne by blowing his oliphaunt until his temples burst. For ten points, name this epic French poem set during the Battle of Roncevaux.

ANSWER: The **Song of Roland** or Le **Chanson de Roland**

18. Cytochrome c oxidase creates an electrochemical potential slope for the synthesis of this molecule. In addition to hydrolysis, this molecule's citrate lyase results in the production of oxaloacetate, and it allosterically inhibits phosphofructokinase. Albert Szent-Györgyi discovered part of this molecule's role after adding it to (*) actomyosin and observing contractions of muscle fibres. Acetyl CoA is broken down into this molecule via oxidative phosphorylation, and it is produced along with NADH during glycolysis. For ten points, name this molecule required for metabolism in organisms, the "energy currency" of the cell.

ANSWER: Adenosine triphosphate (ATP)

19. One of these is caused by Väinämöinen's injury in the Kalevala, while another is initiated with the death of Ymir in the Prose Edda. Vishnu saves Manu from one of these in his Matsya avatar, and Utnapishtim the Immortal survived one of these and is consulted by Gilgamesh. After (*) Pandora's box is opened, Pyrrha and Deucalion withstand one of these. In the Gun Yu myth, one of these lasts multiple generations, forcing people to relocate to mountaintops. Noah captained an ark through, for ten points, what type of weather event?

ANSWER: **flood** (prompt on things like "storm")

20. This man's doctoral thesis was on the plane polarization of light and he developed an early interest in crystal absorption and emission of light. This member of a family of scientists shared the 1903 Nobel Prize in Physics with Marie Curie. Inspired by William (*) Röntgen, this man's most famous experiment involved placing salts onto thick black paper over a photographic plate. Over a series of rainy days, this Frenchman found that the uranium salts developed the photographic plate without sunlight. For ten points, identify this namesake of the SI unit for radiation.

ANSWER: Antoine Henri **Becquerel**

TIEBREAKER:

Zygmunt Klemensiewicz ["klem-en-si-vich"] and Fritz Haber coined the term "glass electrode" for a device that measures this value. One equation relates this value to the acid dissociation constant and is named for Henderson and Hasselbalch. It is also related to water's self-ionization constant, and (*) buffers resist change in this value. This quantity is the logarithm of hydrogen ion concentration, and is typically measured from one to fourteen. Litmus paper measures, for ten points, what name this property of a solution that is seven for water?

ANSWER: pH or potential/power of hydrogen (prompt on "acidity" or "basicity")

Round 7: Bonuses

1. This poem was originally written for Queen Victoria's Diamond Jubilee. For ten points each:

[10] Name this 1899 poem about US imperialism that implores the reader to "Send forth the best ye breed".

ANSWER: "The White Man's Burden"

[10] Name this author of "The White Man's Burden", who also wrote "Gunga Din" and *The Jungle Book*.

ANSWER: Rudyard Kipling

[10] In this Kipling novel, Harvey Cheyne, Jr. boards the *We're Here* and learns how to fish. Theodore Roosevelt heaped praise upon this novel in his essay "The American Boy".

ANSWER: Captains Courageous

2. This principle is violated by HIV and other retroviruses. For ten points each:

[10] Name this term coined by Francis Crick for the assumption that biological information flows from DNA to RNA to protein.

ANSWER: Central Dogma of biology

[10] In the process of translating RNA to proteins, this form of RNA is used. Its cloverleaf structure allows it to uniquely bind amino acids to and bring them the ribosome.

ANSWER: tRNA or transport RNA

[10] Before a mRNA leaves the nucleus to begin translation, these portions of an mRNA may be removed. These portions of a gene are ultimately not expressed in eukaryotic proteins.

ANSWER: **Introns** (prompt on "intragenic sequence" or "intervening sequence")

3. In this work, the unnamed character does not wear a scarlet coat after killing his lover. For ten points each:

[10] Oscar Wilde wrote this poem about Wooldridge's execution while imprisoned for sodomy.

ANSWER: The **Ballad of Reading Gaol** ["redding jail"]

[10] While at Reading Gaol, Wilde was allowed to read only the Bible and "The Pilgrim's Progress," which was written by this man while he was imprisoned for leading religious services without approval from the Church of England.

ANSWER: John Bunyan

[10] This book, written partially in verse, is a conversation between Boethius and Lady Philosophy. It was composed while Boethius was imprisoned waiting to be tried for treason.

ANSWER: The Consolation of Philosophy or De Consolatione Philosophiae

4. This model was first formulated by John Hicks. For ten points each:

[10] Name this macroeconomic model that shows the equilibrium between loanable assets and economic production.

ANSWER: IS-LM (investment-savings/liquidity-money) model

[10] Hicks was a member of this British economist's school of thought, and the IS-LM model was based on this economist's *General Theory of Employment, Interest and Money*. He also wrote *A Treatise on Money* and *A Treatise on Probability*.

ANSWER: John Maynard Keynes

[10] Keynes believed in deficit spending, and his writings convinced this U.S. president to abandon a balanced budget, against the wishes of his Treasury Secretary Henry Morgenthau, Jr.

ANSWER: Franklin Delano Roosevelt (FDR) (prompt on Roosevelt)

- **5.** Unlike the photon, this particle interacts with the force it mediates. For ten points each:
- [10] Name this carrier of the strong force which "adheres" quarks to form protons and neutrons.

ANSWER: gluon

[10] Like other bosons, gluons have an integer value for this quantity, an intrinsic form of angular momentum.

ANSWER: spin

[10] The gluon was first observed from the decay of this meson, composed of a bottom quark and its antiparticle. Its discovery was announced prematurely by Leon Lederman's team, which eventually found it in 1977.

ANSWER: upsilon

- **6.** This movement emphasized virtuous heroes as role models. For ten points each:
- [10] Name this 18th century artistic movement that often depicted stories from Greek and Roman mythology, or otherwise took influence from the art of those cultures.

ANSWER: Neoclassicism

[10] One leading Neoclassicist artist was this female Swiss-born painter of *Cornelia Presenting Her Children as Her Treasures* who was also a founding member of the Royal Academy.

ANSWER: Angelica Kauffman

[10] Jacques Louis-David painted this seminal work of Neoclassicism. It shows the title heroes swearing loyalty to Rome by saluting their swords.

ANSWER: The **Oath of the Horatii**

- 7. Islam began in the Arabian Peninsula, but minority communities exist across the globe. For ten points each:
- [10] Although this country is not a Muslim-majority nation like neighbors Bangladesh and Pakistan, its 172 million Muslims still gives it the third-largest Muslim population in the world.

ANSWER: Republic of **India**

[10] After Sweden, Russia, and Estonia, this country on the Horn of Africa is the origin of the fourth-largest minority in Finland.

ANSWER: Somalia

[10] This Turkic ethnic group, despite accounting for less than 1% of China's population, are the majority in its largest province by area. They once established a Khaganate to the east.

ANSWER: Uyghur

- **8.** Water vapor is one of this phenomenon's namesake gases, although more notorious is carbon dioxide. For ten points each:
- [10] Name this effect by which radiation from the atmosphere warms the surface of a planet. It is cited as a cause of global warming.

ANSWER: **greenhouse** effect

[10] These organic compounds, some of which are marketed as Freon, can cause ozone depletion and have been phased out by the Montreal Protocol.

ANSWER: chlorofluorocarbons (accept CFC)

[10] This chemist formulated a law governing the greenhouse effect, which states that the change in temperature is proportional to the natural log of the ratio of carbon dioxide.

ANSWER: Svante **Arrhenius**

- **9.** This organization participated in alcohol distribution during the Prohibition era. For ten points each:
- [10] This criminal organization, also known as La Cosa Nostra, was dramatized in "The Godfather" and "Goodfellas".

ANSWER: Mafia

[10] The Mafia in New York have been divided into these structures since the Castellammarese War. The Commission, which governs Mafia activity in the U.S. and Canada, includes representatives from these bodies and the boss of the Chicago Outfit.

ANSWER: Five Families (prompt on just "families")

[10] This boss of the Genovese crime family was successfully prosecuted for forced prostitution by Thomas Dewey and was allowed to leave the country instead of serving his sentence. He had previously survived having his throat cut.

ANSWER: Charles "Lucky" Luciano or Salvatore Lucania

10. Kenya is a highly multilingual nation. For ten points each:

[10] This national language of Kenya has used two different writing systems, Arabic script and Roman letters.

ANSWER: ki**Swahili**

[10] Kiswahili is the largest language in this family which also includes isiZulu and Gikuyu.

ANSWER: **Bantu** (prompt on **Niger-Congo**)

[10] This second most commonly spoken language in Kenya is an official language there, as well as in neighboring Tanzania and Uganda.

ANSWER: English

11. Milford Sound is one of these geographical features found in New Zealand. For ten points each:

[10] This type of inlet is caused by glacial erosion. Unlike rivers, they are usually flanked by cliffs and are deeper than the ocean floor near their end.

ANSWER: **fjord**

[10] Fjord is a word from this nation. This Scandinavian nation's coastline is ten times greater when fjords are included than when they are not.

ANSWER: Norway

[10] This largest Norwegian fjord is fed by the melt of the Jostedal Glacier.

ANSWER: **Sogne**fjord

- 12. In this comic strip, the title character works in Silicon Valley. For ten points each:
- [10] This comic strip, first published April 16, 1989, features an engineer interacting with an incompetently run office. A principle named after this comic strip is that companies will promote the least-competent employees so they can do less damage.

ANSWER: **Dilbert**

[10] "Dilbert" is written and illustrated by this man, who endorsed, in succession, Hillary Clinton, Donald Trump, and Gary Johnson for the 2016 Presidential election.

ANSWER: Scott Adams

[10] This feline Human Resources director in "Dilbert" uses the resumés he receives for job applicants in place of kitty litter, saying that he is matching the applicants with suitable openings.

ANSWER: Catbert

- **13.** For ten points each, name these famous violinists:
- [10] This Italian violinist is said to have sold his soul to the devil to be able to play so well. His compositions include his 24 Caprices, and are widely considered to be a pillar of the violin repertoire.

ANSWER: Niccolò Paganini

[10] This American violinist was the soloist for the soundtrack to *The Red Violin*. In 2007, he played in a Washington D.C. subway station, and was not recognized.

ANSWER: Joshua Bell

[10] This Israeli-American violinist was diagnosed with polio at age 4, forcing him to walk with crutches and sit while playing. He played at Barack Obama's 2009 inauguration.

ANSWER: Itzhak Perlman

- **14.** On March 11, 2011, a magnitude 9 earthquake struck off the coast of Japan. For ten points each:
- [10] That earthquake resulted in one of these giant waves, created by the sudden uplift of water.

ANSWER: tsunami

[10] The earthquake and tsunami damaged this nuclear power plant. It led to the second Level 7 nuclear event in history, after the Chernobyl disaster.

ANSWER: Fukushima Daiichi

[10] This process was applied to the soil around the power plant to prevent melted nuclear fuel from escaping.

ANSWER: freezing

- **15.** *Titus Andronicus* is considered to be this type of play. For ten points each:
- [10] Name this type of play which is characterized by the protagonist hunting down the one who wronged them.

ANSWER: **revenge** Play (Accept **revenge** tragedy)

[10] In this revenge play, Hieronimo tries to avenge the death of his son, Horatio, by killing his murderers, Lorenzo and Balthazar, during a play (inside the play) with the help of Bel-Imperia.

ANSWER: The Spanish Tragedy

[10] *The Spanish Tragedy* was written by this Elizabethan playwright who co-authored the play *Edward III* with Shakespeare.

ANSWER: Thomas **Kvd**

- **16.** Cinder cones and lava domes are these types of geologic features. For ten points each:
- [10] This type of low-lying geological feature is built by long, fluid lava flows. Sheets of these flows dry and stack, creating these features known for the duration of their eruptions.

ANSWER: **shield volcano** (prompt on "volcano")

[10] The shield volcanoes in Hawaii and the Galapagos formed over these subsurface features. Some island chains are thought to have been formed by the tectonic plates moving over these mantle-depth features.

ANSWER: Hotspots

[10] This Hawaiian shield volcano has been erupting continuously since 1983 and is the smaller of the two volcanoes in Hawai'i Volcanoes National Park.

ANSWER: Kīlauea

- **17.** At the beginning of this work, the Creator releases "a million stupendous suns," and brings about the world. For ten points each:
- [10] Name this collection of commentaries concerning the letters written to the archangels Gabriel and Michael by Satan about the proceedings of life and religion from the view of God.

ANSWER: **Letters from the Earth**

[10] Letters from the Earth were written by this author who wrote about Jim and the title character's trip down river in The Adventures of Huckleberry Finn.

ANSWER: Mark Twain (Accept Samuel Langhorne Clemens)

[10] Jim Smiley is cheated out of forty dollars after his pet Dan'l Webster is weighed down by the opponents' lead shot in this Twain work.

ANSWER: The Celebrated Jumping Frog of Calaveras County

18. Ancient Carthaginians and the Greek city-states led by Syracuse fought for control over this island from 600-250 BC. For ten points each:

[10] Name this Mediterranean island whose major cities include Palermo and Messina that was granted autonomy in a 1946 referendum.

ANSWER: Sicily

[10] During the 13th century, this kingdom led by Charles of Anjou held control of Sicily after defeating and killing Manfred at the Battle of Benevento.

ANSWER: Kingdom of France

[10] However, Charles of Anjou lost control of Sicily after this rebellion named for the evening prayer in Catholic and other churches.

ANSWER: Sicilian Vespers

19. For ten points each, answer some questions about George Frideric Handel.

[10] Handel was born in Germany, but became a naturalized subject of this country in 1727. Much of his popular output was for the royalty of this nation, such as the *Coronation Anthems*.

ANSWER: **Great Britain** (accept **U**nited **K**ingdom; prompt on "England")

[10] Handel's original patron was this king of Great Britain. His wish for a concert on the Thames resulted in the composition of Handel's *Water Music*.

ANSWER: King George I

[10] At the premiere of Handel's *Messiah*, King George I is said to have done this action during the Hallelujah Chorus. This action is now done traditionally by the audience during any playing of the chorus.

ANSWER: standing

- **20.** The Roman military was notable for their heavy infantry units. For ten points each:
- [10] Name this class of infantry, equipped with two meter long spears and usually positioned in the rear. An old Roman expression signalling desperation was "It has come down to" this unit.

ANSWER: Triarii

[10] This Roman general was a rival to Sulla, known for his namesake reforms that allowed landless citizens to join the army and offered land to soldiers for their retirement.

ANSWER: Gaius Marius

[10] The product of the Marian Reforms would be these iconic military units of close to 5,000 men each, famous for their engineering feats and supported by the auxillia.

ANSWER: legions

EXTRA:

In the foreground of this painting a woman is holding a monkey on a leash. For ten points each:

[10] The bourgeoisie relax on the right bank of the Seine in this large neo-Impressionist painting where Several women hold parasols on the sunny day depicted in this work.

ANSWER: A <u>Sunday Afternoon on the Island of La Grande Jatte</u> or Un <u>Dimanche après-midi à l'îlle de la Grande</u> <u>Jatte</u>

[10] This French painter of A Sunday Afternoon on the Island of La Grande Jatte also painted working class Parisians on the left bank of the Seine in Bathers at Asnières.

ANSWER: Georges-Pierre Seurat

[10] A Sunday Afternoon on the Island of La Grande Jatte is housed in this museum, which also holds Nighthawks and American Gothic.

ANSWER: Art Institute of Chicago