Vermont-NEA Scholars' Bowl

2020-21 Sample Packet KM-1

Round one (10 points each)

Category 1: Science

Team 1: What law combines Charles's Law, Gay-Lussac's law, and Boyle's law, and is written PV=nRT?
ANSWER: ideal gas law

Team 2: What vitamin is also known as ascorbic acid?
ANSWER: Vitamin C

Category 2: World History

Team 2: Gaining independence in 2011, and joining the United Nations that same year, what is the newest widely-recognized sovereign country in the world?
ANSWER: South Sudan

Team 1: The Nagorno-Karabakh War was an ethnic and territorial conflict in the 1980s and 90s fought between the Republic of Azerbaijan and members of what ethnic group?
ANSWER: Armenians

Category 3: Visual Arts

Team 1: Roy Lichtenstein's comic book inspired works, such as Whaam! are examples of what art movement?
ANSWER: Pop Art

Team 2: Arrangement in Grey and Black, No. 1 is better known as whose mother?
ANSWER: James McNeill Whistler (accept Whistler's Mother)

Category 4: Computational Math

Team 2: Pencil and paper ready. What is the greatest common divisor, or GCD, of 104 and 143?
ANSWER: 13

Team 1: Pencil and paper ready. How many rotations per minute does a wheel make if it rotates 72,000 times every 8 hours?
ANSWER: 150

Category 5: Classical Music

Team 1: Perhaps the best known work of organ music, what two musical terms refer to J.S. Bach's BWV 565 in D Minor, from the Italian words for "to touch" and "to flee?"
ANSWER: Toccata and Fugue

Team 2: J.S. Bach's BWV 249, beginning with Kommt, eilet und laufet, which translates as "Come, Hasten and Run", is traditionally associated with what holiday?
ANSWER: Easter

Category 6: U.S. History

Team 2: New Orleans District Attorney Jim Garrison is most well-known for investigations into the murder of whom?
ANSWER: John Fitzgerald Kennedy (accept JFK)

Team 1: A college in Rindge, New Hampshire is named after--though possibly not for long--what former President of the United States?
ANSWER: Franklin Pierce

Category 7: Shakespeare

Team 1: Two men both named Antipholus and two more both named Dromio are at the center of what early Shakespeare play?
ANSWER: The Comedy of Errors

Team 2: Early in the Shakespeare play King Lear, which of his daughters does not flatter him, thus being disinherited?
ANSWER: Cordelia

Category 8: American Literature

Team 2: Lotus Flower and O-Lan are characters in what novel, for which Pearl S. Buck won the 1932 Pulitzer Prize for Fiction?
Answer: The Good Earth

Team 1: Biff, Happy and Willy Loman are characters in what play by Arthur Miller?
ANSWER: Death of a Salesman

Round two (20-15-10)

Category 1: Chemistry

Team 2

For 20: One mole of this compound can react with three moles of hydrogen to make cyclohexane. Name the compound.
For 15: This compound can be represented as a hexagon with alternating single and double bonds.
For 10: This aromatic hydrocarbon's molecular formula is C6H6.
ANSWER: benzene

Team 1

For 20: Name the metal that is a poor conductor of heat and electricity has a low melting point of 640 degrees C and an unusually high boiling point of 3,228 degrees C.
For 15: It is the heaviest naturally occurring element, with trace amounts having been found in places such as Gabon and Canada.
For 10: Name this radioactive element named for a planet that has atomic number 94.
ANSWER: Plutonium

Ca10tegory 2: Physics

Team 1

For 20: A torsion balance was used to measure this fundamental constant in the Cavendish experiment. Name this fundamental constant.
For 15: This constant is about 6.67 times 10 to the negative 11, in units of meters cubed per kilogram per second squared.
For 10: This constant appears in Newton's law of gravity.
ANSWER: gravitational constant (or Big G)

Team 2

For 20: According to legend, this physicist's fundamental belief was that "the laws of nature should be expressed in beautiful equations." Name him.
For 15: This English theoretical physicist shared the 1933 Nobel Prize in physics with Erwin Schrodinger for "the discovery of new productive forms of atomic theory."
For 10: His namesake equation, among other things, predicts the existence of antimatter.
ANSWER: Paul Dirac

Category 3: Religion

Team 2

Name the holiday.
For 20: One of this holiday's most prominent customs is credited to Pope Gregory I.
For 15: This holiday will next be observed on Wednesday, February 17, 2021.
For 10: This holiday begins Lent, and its namesake substance is used to draw crosses on observers' foreheads.
ANSWER: Ash Wednesday

Team 1

Name the religion.
For 20: The name for followers of this religion is derived from a word meaning "victor."
For 15: This religion traces its spiritual ideas through a succession of 24 tirthankaras.
For 10: Name this ancient Indian religion whose main premise is ahimsa, or non-violence.
ANSWER: Jainism

Category 4: Pop Culture

Team 1

Name the film.
For 20: Miyoshi Umeki is the only Asian woman to date to win an Academy Award for acting, for her role in what film?
For 15: This 1957 Marlon Brando vehicle tells the story of an American Air Force pilot who falls in love with a Japanese dancer during the Korean War.
For 10: The title of this film literally translates as "if that's the way it is".
ANSWER: Sayonara

Team 2

Name the team.
For 20: This team co-founded by Danny Thomas joined the American Football League in 1965.
For 15: This team was the first to appear in 3 straight Super Bowls.
For 10: In 1972, this team coached by Don Shula completed the NFL's first and only perfect season, capping the undefeated season by beating Washington 14-7 in Super Bowl VII.
ANSWER: Miami Dolphins (accept either)

Round three (15 points each)

Category 1: Biology

Team 1: What is the name for the group of flowering plants, mostly in the family Asteracae, that serves at the floral emblem of Scotland and Lorraine, and also the emblem of Encyclopedia Britannica?
ANSWER: thistle

Team 2: Stephen Jay Gould and Niles Eldredge famously developed what theory, which describes the rate of speciation in the fossil record as occurring relatively rapidly, alternating with longer periods of evolutionary stability?
ANSWER: Punctuated equilibrium

Category 2: World History

Team 2: Members of the House of Hohenzollern including Frederick the Great and ending with Kaiser Wilhelm I, were recognized as kings of what German state that originated in 1525 and was located on the Baltic Sea?
ANSWER: Prussia

Team 1: In 1916 the German protectorate of Togoland was split into French Togoland, which is in modern-day Togo, and British Togoland, which gained independence under the administration of what current nation?
ANSWER: Ghana

Category 3: World Literature

Team 1: Marjane Satrapi's critically acclaimed graphic novel *Persepolis* depicts her childhood growing up in what country?
ANSWER: Iran

Team 2: Known for works such as *Confessions of a Mask* and *Temple of the Golden Pavilion*, what author was considered for the 1968 Nobel Prize in Literature but lost to countryman Yasunari Kawabata?
ANSWER: Yukio Mishima (Accept Kimitake Haraoka)

Category 4: European Literature

Team 2: First performed in 1664, what French comedy features the characters Elmire and Orgon?
ANSWER: Tartuffe

Team 1: What work by Stendhal chronicles the coming of age of Julian Sorel, who grows from his modest beginnings but is ultimately betrayed by his passions?
ANSWER: The Red and the Black (Accept Le Rouge et la Noir)

Category 5: U.S. History

Team 1: Ecological wisdom, social justice, grassroots democracy and nonviolence are the Four Pillars of the political ideology behind what minor political party in the United States, whose 2020 presumptive presidential nominee is Howie Hawkins?
ANSWER: Green Party (accept Greens)

Team 2: Brokered by Whig Senator Henry Clay and Democratic Senator Stephen Douglas with the support of President Millard Fillmore, what name is used today for the package of 5 bills that defused a political confrontation between slave and free states on the status of territories acquired during the Mexican War?
ANSWER: Compromise of 1850

Category 6: General Math

Team 2: Consider the following paradox: In a town, the barber shaves everyone who doesn't shave themselves, and ONLY those who do not shave themselves. Who shaves the barber? This is an example of the namesake paradox of what English mathematician and philosopher?
ANSWER: Bertrand Russell

Team 1: Georg Cantor's diagonalization argument is a proof that there are different sizes of what?
ANSWER: Infinities (accept infinity, infinite sets)

Category 7: Geography

Team 1: The world's largest island in a lake is Canada's Manitoulin Island, located in what lake?
ANSWER: Lake Huron

Team 2: Located 1300 miles from St. Helena and even further from any continents, what archipelago in the South Atlantic is considered the most remote inhabited archipelago in the world?
ANSWER: Tristan da Cunha

Category 8: American Literature

Team 2: What is the name of the fictitious typical American Midwestern city that is the setting of Sinclair Lewis's *Babbitt*?

ANSWER: Zenith

Team 1: 9 of the plays in August Wilson's Pittsburgh Cycle, including *Fences*, whose critically acclaimed film adaptation was released in 2016, are set in Pittsburgh. The 10th, *Ma Rainey's Black Bottom*, is set in what American city?
ANSWER: Chicago, Illinois