

Governor's School Academic Competition XXV

Round 4

TOSSUPS

1. A time capsule buried in 1992 lies beneath an LED-lit cross at the peak of one landmark in this city. This city's downtown contains the "Underground City" known as RÉSO, which is integrated with its metro system. A housing complex in this city designed by Moshe Safdie for the 1967 (*) World's Fair is visible from this city's "Biosphere". This city is home to St. Joseph's Oratory and the Place Ville Marie. The "Big O" nicknames the main venue for the 1976 Summer Olympics held in this city, which is also the home of McGill University. For 10 points, name this largest city in Quebec, named for a royal mountain.

ANSWER: Montreal, Quebec, Canada [do not prompt on just "Quebec"]

2. Mount Athos is a center of ascetic prayer for Hesychasts, believers from this group. In this religion the Symbol of Faith is sung during the Liturgy of the Faithful, before the Anaphora. The goal of its adherents is to achieve theosis, or deification, through the illumination of (*) God. This branch's liturgical calendar begins on September 1 and it also has feasts centered around Pascha, or Easter. All of its churches are self-ruling with the ecumenical patriarch of Constantinople considered "first among equals." The Roman Catholic Church split from, for 10 points, what branch of Christianity in the Great Schism of 1054?

ANSWER: Eastern Orthodox Catholic Church [accept equivalents such as Orthodox Christianity, prompt on "Catholic" and "Christianity" before mentioned, do not accept "Oriental Orthodox"]

3. One sculpture originally titled *Francesca da Rimini* that decorated one of these objects was replaced because it did not depict enough suffering. A sculpture of one of these things contains a self-portrait and ten relief panels of scenes from the New Testament. *Paolo and Francesca*, *The (*) Kiss*, and *The Thinker* are all part of one of these set of structures. Lorenzo Ghiberti designed a bronze pair of these objects named "of Paradise" for the north entrance of the Baptistery of Florence. Auguste Rodin depicted a scene from Dante's *Inferno* in, for 10 points, a sculpture of what kind of thresholds "of Hell"?

ANSWER: gates [accept doors; accept Gates of Hell; accept Gates of Paradise; prompt on "entrances to the underworld" or similar answers]

4. One of this man's economic policies created 5,000 farms near the Pontine Marshes and was known as the Battle for Wheat. This leader's body was hung on a meathook and later dug up by his supporters. This proponent of "corporate statism" was praised as the "Man of Providence" when he signed the (*) Lateran Accords in 1929. This leader successfully passed the Acerbo Law but faced a parliamentary boycott after the assassination of the socialist Giacomo Matteotti. In the March on Rome, this man came to power while leading the Blackshirts. For 10 points, name this Italian fascist nicknamed "Il Duce".

ANSWER: Benito Amilcare Andrea Mussolini

5. **During one of these events, Rachel Verinder acquires a cursed diamond in a Wilkie Collins novel. Tom Buchanan offers an unopened bottle of whiskey as Nick realizes he had forgotten one of these events. Meg gives one character a (*) toy drum during one of these events, which he later smashes during a game of Blind Man's Bluff while attempting to rape Lulu. In *Our Town*, Emily returns from death to relive her twelfth one of these events. For 10 points, identify this day of celebration, for which Stanley receives a titular party in a Harold Pinter play.**

ANSWER: **birthdays** [accept **birthday party**; accept *The Birthday Party*; accept the **birthday** in *Moonstone*; or obvious equivalents]

6. **This battle saw one side capture St. Vith in an attempt to recapture Antwerp. At the onset of this battle, the Malmedy Massacre saw 84 POWs executed. The Losheim Gap was closed on the first day of this battle. Operation Stösser was the only nighttime German (*) paratroop raid of the war during this battle. Allied soldiers primarily relied on the Red Ball Express for front-line supplies during this battle. After hearing of the German siege of Bastogne during this battle, Anthony McAuliffe replied, "Nuts!". For 10 points, name this 1944 German winter offensive during WWII that was ultimately repulsed by the Allies.**

ANSWER: Battle of the **Bulge** [accept Operation **Watch on the Rhine** or **Wacht am Rhein**]

7. **In one scene in this novel, a character masquerades himself as a bear using a stolen costume originally used for religious rites. The antagonist of this novel is also known by the alias "Le Renard Subtil." That character blames his demotion and the departure of his wife on (*) Colonel Munro, whose daughters Alice and Cora are abducted by Magua. This novel, which opens at Fort William Henry, uses the trope of the noble savage through the characters of Uncas and Chingachgook. For 10 points, name this second novel of James Fenimore Cooper's *Leatherstocking Tales*.**

ANSWER: *The Last of the Mohicans*

8. **"Sprite" sculptures were included in one of this architect's since-demolished projects, the Midway Gardens. The entrance to one building designed by this architect features a reflecting pool and staggered blocks that resembled Mayan pyramids. In 2017, a (*) MoMA exhibit displayed a collection of this architect's designs, including one for a cantilevered house for Edgar Kaufman that has a stream running through the living room. A museum by this architect on 5th Avenue features a spiralling ramp. The Solomon R. Guggenheim Museum was designed by, for 10 points, what American Prairie School architect of Fallingwater?**

ANSWER: Frank Lloyd **Wright**

9. **This structure contains a costomediastinal recess, and the superficial plexus extends over the surface of this organ. Although not the kidney, antibodies attack the basement membrane of this organ in Goodpasture syndrome. Cancers of this organ are classified as (*) "small cell" or "non-small cell", and the mediastinum separates the pleural membranes of this organ. The only vein containing oxygenated blood connects the heart to this organ, which is affected by COPD and bronchitis. It contains sacs called alveoli, for 10 points, name this organ that exchanges carbon dioxide and oxygen during respiration.**

ANSWER: **lung**

10. In this play, a character criticized for calmly eating muffins responds by saying eating them agitatedly would get butter all over his cuffs. Another character in this play creates a fake relationship and proposal through letters she wrote herself. In one scene of this play, two characters eat a plate of (*) cucumber sandwiches meant for Aunt Augusta. In the climax, Miss Prism reveals she is, in fact, the woman that left a baby in a handbag at Victoria station. Two characters once discuss bunburying, a way to avoid social obligations in this play. For 10 points, name this Oscar Wilde play in which Algernon Moncrieff and Jack Worthing pretend to have the titular name.

ANSWER: *The Importance of Being Earnest*

11. A famous location that produced this substance in medieval times is located in Wieliczka, Poland. This non-animal resource was required for the production of garum in ancient Greece and Rome. A black-colored type of this resource was used as currency known as amoles in Ethiopia. In his travelogues, Marco Polo described the process of creating a paste of this substance by (*) boiling it in pans. The term “salary” is so named because Roman soldiers were sometimes paid with this edible commodity, which was often traded for gold by West African empires. For 10 points, name this mineral whose “table” variety is used to season food.

ANSWER: salt

12. A form of this molecule is the precursor to aniline, and a reduction reaction transforms this compound into 1,4-cyclohexadiene. It reacts with a haloalkane and a Lewis acid catalyst in the Friedel-Crafts alkylation, and naphthalene is created through the fusion of two of these molecules. The hydrogenation of this molecule yields (*) cyclohexane, and adding a methyl group to this molecule creates toluene. Kekule discovered the structure of this molecule, which contains alternating single and double bonds. Drawn as a hexagon surrounding a circle, for 10 points, name this simplest aromatic hydrocarbon with formula C₆H₆.

ANSWER: benzene [prompt on “C₆H₆” before mentioned]

13. This dynasty allied with the Kushans during their conquest of Kashgar. Wang Mang attempted to form his own dynasty during this period, only to be killed by members of the Red Eyebrows Movement. This dynasty completed its conquest of Vietnam under the general Ma Yuan after defeating the (*) Trung Sisters. This dynasty began following Liu Bang’s victory over Xiang Yu and the state of Chu. Its later Eastern period ended after the Yellow Turban Rebellion. For 10 points, name this dynasty that lasted from 206 BCE to 220 CE and shares its name with China’s largest ethnic group.

ANSWER: Han Dynasty

14. A character in this TV show meets Kevin Miller and Frank Gallo at Danbury Federal Prison, and \$25,000 of marijuana spills out of that character’s briefcase during a job interview in the pilot episode of this series. In this show, a partnership with Darby International is dissolved after the acquittal of Ava Hessington. After the death of his wife Alicia, Daniel (*) Hardman resumes control of a law firm where Jessica Pearson, Louis Litt, and Harvey Specter work, in this TV show. For 10 points, Mike Ross illegally practices law in what TV series named for a formal item of clothing?

ANSWER: Suits

15. **Collisions lessen the effect of this phenomenon on spectral lines in the Dicke Effect. Laser vibrometers utilize this phenomenon to measure surfaces without contact, while echocardiograms can determine the speed and direction of blood flow using this effect. Using canal rays, (*) Ives and Stilwell detected the “transverse” type of this effect. It causes redshift and blueshift in astronomical phenomena, and it explains the change in pitch of a passing ambulance’s siren. For 10 points, name this effect in which the frequency of a wave changes for an observer as the source moves.**

ANSWER: Doppler effect

16. **A character in this work demands a ring as payment after disguising herself as a lawyer sent by Doctor Bellario. Nerissa and Gratiano fall in love at Belmont in this play. One character in this play asks, “If you prick us, do we not bleed?” while another claims that “the quality of (*) mercy...droppeth like a gentle rain from heaven.” During one scene in this play, a lead casket is selected, revealing a portrait of Portia, allowing Bassanio to marry her. For 10 points, name this Shakespeare play in which the Jewish moneylender Shylock sues Antonio, who is of the title profession, for a pound of his flesh.**

ANSWER: *The Merchant of Venice*

17. **The “17” revision of this language resolved underspecification of unique-keyed map containers by adding the algorithms “try_emplace” and “insert_or_assign”. In 2012, the integration of transactional language constructs with this language was proposed by its (*) “Evolution Working Group”, although this proposal has not been adopted. Examples of desktop software written primarily in this language include Mozilla Firefox and iTunes. For 10 points, name this object-oriented programming language, invented by Bjarne Stroustrup, a successor to C.**

ANSWER: C++ [accept C plus plus; do NOT accept or prompt on C]

18. **A *Guest of Honor* was a lost opera in this genre of music, which is emulated in the sixth movement of Claude Debussy’s *Children’s Corner* titled *Golliwog’s Cakewalk*. An A-flat major piece in this genre involves the left hand playing a steady march and was published by John (*) Stark. Joseph Lamb composed “heavy” and “light” pieces in this musical style, which also titles a novel by E.L. Doctorow. This musical style of pieces like “The Entertainer” is characterized by a syncopation of melodic accents between metrical beats. For 10 points, name this precursor to jazz, the genre of a “Maple Leaf” piece by Scott Joplin.**

ANSWER: ragtime [prompt on “rags”]

19. **The earliest depiction of this deity comes from a tomb from the Naqada I period, and the Hyksos primarily worshipped this deity from Avaris. He lost a boat race after his opponent fashioned a boat out of wood instead of stone, and his diet consisted solely of (*) lettuce. This deity, often conflated with the Greek god Typhon, repels the serpent Apep from Ra’s solar boat. Geb divided Egypt into two halves, giving the desert to this god and the other half to his nemesis, who was his nephew. For 10 points, name this evil Egyptian storm god, the husband of Nephthys and enemy of Horus.**

ANSWER: Set [or Seth; or Setekh; or Suty; or Setesh]

20. **The Cattell-Horn-Carroll theory combines two models for this property, identifying its “fluid” and “crystallized” types. In his book *Frames of Mind*, Howard Gardner proposed “multiple” types of this quality. Robert Sternberg’s triarchic theory of it describes its “componential”, “experiential”, and “practical” types. Charles (*) Spearman proposed a general factor to explain it, and the Flynn effect describes the increase in this quantity over time. A metric for this property has a mean of 100 and a standard deviation of 15 points. For 10 points, name this property, whose quotient is measured by the Stanford-Binet Test.**

ANSWER: **intelligence**

TIEBREAKER

21. **This molecule acts as an electron donor in the synthesis of carnitine, and rose hips and the Kakadu plum are rich sources of this vitamin. The hydroxylation of proline and lysine in collagen requires this vitamin as a cofactor. (*) Linus Pauling encouraged taking megadoses of this water-soluble vitamin, also known as ascorbic acid, to treat the common cold. A condition characterized by bleeding gums and brown spots on the skin is caused by a deficiency of this vitamin; that condition is scurvy. For 10 points, name this vitamin that is found in broccoli and citrus fruits.**

ANSWER: **vitamin C** [accept **ascorbic** acid before mentioned]

BONUSES

1. This man was chosen by the “Committee of 100” to run for Congress, and defeated Jerry Voorhis in 1946. For 10 points each:

[10] Name this politician, who first gained national attention for urging the House to continue its investigation of the Alger Hiss spy case.

ANSWER: Richard **Nixon**

[10] As President, Nixon stated “I’m not a crook” during this scandal that began with a break in at the DNC headquarters in Washington D.C.

ANSWER: **Watergate**

[10] The story surrounding Watergate was picked up by *The Washington Post* and spearheaded by these two investigative journalists. Name either.

ANSWER: Carl **Bernstein** or Bob **Woodward**

2. This empire ended 500 years of fragmentation and disunion following the decline of the Mauryan Empire, for 10 points each:

[10] Name this Golden Age Indian empire. Not much is known about its early years, apart from writings by the Chinese Buddhists Faxian, Xuanzang, and Yijing.

ANSWER: **Gupta** Empire

[10] Gupta rulers such as Srigupta and Chandragupta ruled from this city in the state of Magadha. Either the ancient or modern name is acceptable.

ANSWER: **Patna** [accept **Pataliputra**]

[10] As part of his goodwill efforts, Emperor Samudragupta aided Meghavarna, the king of this island, with the construction of a monastery. Under the British, this island was called Ceylon.

ANSWER: **Sri Lanka**

3. In a novel by this author, one character sees a giant ‘A’ formed in the sky by a meteor, as he stands atop a scaffold with two other characters. For 10 points each:

[10] Name this author who wrote about the love triangle between Dimmesdale, Chillingworth, and Hester Prynne in *The Scarlet Letter*.

ANSWER: Nathaniel **Hawthorne**

[10] Hawthorne also wrote this novel, in which the title estate was seized from its rightful owner, Matthew Maule, after he was accused of practicing witchcraft and executed.

ANSWER: *The **House of the Seven Gables***

[10] In the novel, the current resident of the house is Hepzibah, who has this family surname. The mysterious attic lodger Holgrave writes a history of this family.

ANSWER: **Pyncheon** family

4. This cycle involves producing eggs in the ovaries and releasing them to the uterus to achieve pregnancy, for 10 points each:

[10] Name this reproductive pattern that also includes the shedding of the uterine walls and bleeding, a cycle that repeats approximately every 28 days.

ANSWER: **menstrual** cycle [accept **menstruation**]

[10] The second phase of the menstrual cycle is named after this hormone which is released from the anterior pituitary along with follicle-stimulating hormone. The “surge” of this hormone induces ovulation.

ANSWER: **luteinizing** hormone [prompt on **LH**]

[10] A large amount of this other hormone is produced by the corpus luteum after ovulation. This hormone prepares the uterus for the implantation of a zygote and causes the thickening of the vaginal epithelium.

ANSWER: **progesterone**

5. Pat Barker’s novel *The Ghost Road* won the Booker Prize in 1995 and was the last novel in her Regeneration Trilogy, set during this war. For 10 points each:

[10] Name this war, which is the setting for a John McCrae poem that describes people lying “Between the crosses, row on row,” who “shall not sleep, though poppies grow.”

ANSWER: **World War I** [accept **First World War** or the **Great War**]

[10] One of the most famous World War I poets was this man, who wrote the anti-war poems “Anthem for Doomed Youth” and “Dulce et Decorum Est” based on his experiences as a soldier.

ANSWER: Wilfred **Owen**

[10] Wilfred Owen’s work was greatly influenced by this leading war poet, who protested the war in his “Soldier’s Declaration” of 1917 and wrote poems such as “Suicide in the Trenches.”

ANSWER: Siegfried **Sassoon**

6. In the twin paradox, the twin who stays on Earth experiences more of this quantity, and its dilation occurs close to the speed of light. For 10 points each:

[10] Name this phenomenon that Einstein linked with space to form the basis of special relativity.

ANSWER: **time**

[10] This doubly-eponymous experiment’s negative result was the first indirect confirmation of time dilation. It modified an earlier experiment by shortening one arm of the original interferometer and proved the speed of light was independent of the velocity of the device.

ANSWER: **Kennedy-Thorndike** experiment

[10] Kennedy and Thorndike adapted this experiment whose negative result can be explained by length contraction. This landmark experiment also disproved the existence of “luminiferous aether.”

ANSWER: **Michelson-Morley** experiment

7. The four factors of production include land, capital, entrepreneurship and this concept, whose division is the subject of a work by Emile Durkheim. For 10 points each:

[10] Name this factor. A branch of economics named after this concept examines how supply and demand for it affect things like wages and income.

ANSWER: **labor**

[10] The increase in productivity as a result of a division of labor was discussed by this classical economist in his *Wealth of Nations*.

ANSWER: Adam **Smith**

[10] In this treatise that criticizes conspicuous consumption, Thorstein Veblen argues that the division of labor resulted in lower classes being the only ones in productive occupations.

ANSWER: *The **Theory of the Leisure Class***

8. Newton's method finds these values by repeatedly taking the derivative of the function at different points until they are found. For 10 points each:

[10] Name these values, the locations at which a function is equal to zero. Descartes's rule of signs upper bounds the number of positive and negative examples of them for polynomials.

ANSWER: **roots** [prompt on "x-intercepts"]

[10] According to the fundamental theorem of [this branch of mathematics], the degree of a polynomial equals its number of roots considered over the complex plane.

ANSWER: **algebra**

[10] These special types of roots form a cyclic group under multiplication and satisfy equations of the form $z^n = 1$.

ANSWER: roots of **unity** [accept **de Moivre** numbers]

9. This feature lies about 120 miles east of its namesake islands in the West Pacific. For 10 points each:

[10] Name this deepest point in the world's oceans. Its maximum depth is reached at the slot-shaped valley Challenger Deep.

ANSWER: **Mariana Trench** [accept **Marianas Trench**]

[10] The Cayman Trough is this sea's deepest point. This sea includes the world's second-largest barrier reef.

ANSWER: **Caribbean** Sea

[10] This deepest point in the Mediterranean Sea is located in the Hellenic Trench, formed where the African Plate subducts under the Aegean Sea Plate.

ANSWER: **Calypso Deep**

10. In one episode of this show, a character turns himself into a pickle and saves himself by harvesting cockroach and rat organs and limbs, for 10 points each:

[10] Name this American animated sci-fi series that follows a genius scientist and his grandson. One meme that emerged from this ongoing series is the obsession around Szechuan sauce.

ANSWER: **Rick and Morty**

[10] In the first “Interdimensional Cable” episode, a parody of this fictional cat is portrayed as a Gazorpian from Gazorpazorp. Instead of lasagna, the *Rick and Morty* version likes enchiladas.

ANSWER: **Garfield**

[10] Another sketch from that episode sees children tear open the intestines of Tophat Jones to eat the Strawberry Smiggles in his intestines. Jones is a parody of the mascots of these two cereals. Name either.

ANSWER: **Lucky Charms** or **Trix Cereal**

11. One character grabs the gold pins from this woman’s dress and plunges them into his eyes out of despair. For 10 points each:

[10] Name this female character, who hangs herself in her bedroom after a former shepherd from Mt. Cithaeron reveals the story of her son.

ANSWER: **Jocasta**

[10] Oedipus marries his mother Jocasta and kills his father Laius in the play *Oedipus Rex* by this Greek tragedian.

ANSWER: **Sophocles**

[10] This brother of Jocasta and King of Thebes offered her hand in marriage to anyone who could free the city from the Sphynx, and in a later play, sentenced Antigone to death.

ANSWER: **Creon**

12. Hess’s law states that the change in this quantity for a reaction is independent of the reaction’s number of steps, for 10 points each:

[10] Name this quantity, equal to the internal energy of a system plus the product of pressure and volume. If the change in this quantity for a reaction is positive, the reaction is endothermic.

ANSWER: **enthalpy**

[10] Enthalpy is conserved in this doubly eponymous throttling process that models a change in a real gas or liquid when it is forced through a valve.

ANSWER: **Joule-Thomson** effect [accept **Joule-Kelvin** effect, **Kelvin-Joule** effect, and **Joule-Thomson** expansion]

[10] The Joule-Thomson effect calculates the change in this quantity. A Carnot engine transfers heat between two reservoirs with differing values of this quantity.

ANSWER: **temperature**

13. Identify several key battles from WWI's Western front, for 10 points each:

[10] This 1916 battle was engineered by Erich von Falkenhayn to crush the French army in an old Roman fort. Philippe Petain organized the defense during this battle, saving the French army.

ANSWER: Battle of **Verdun**

[10] This early WWI battle halted the German army following their victory at the Battle of the Frontiers. It was fought along its namesake river.

ANSWER: First Battle of the **Marne**

[10] This 1918 battle, also fought near the Marne, saw the US Marines' first major action during the war. US divisions captured Hill 142 and repulsed five German divisions during this battle.

ANSWER: Battle of **Belleau Wood** [prompt on "German Spring Offensive"]

14. This architect designed a building that contains exposed white granite and an auditorium framed by glass-clad steel. She was also the first woman to win the Pritzker Prize. For 10 points each:

[10] Name this Iraqi-British architect who, in addition to the Guangzhou Opera House, designed the London Aquatics Center on the banks of the Waterworks River.

ANSWER: Zaha **Hadid**

[10] Hadid designed several office-retail complexes named for a Chinese real estate developer with this four-letter name. These four letters also name a Manhattan neighborhood south of a certain street that is known for its designer boutiques and art galleries.

ANSWER: **SOHO** [not that it would matter, but also accept **SoHo**]

[10] Hadid designed the London Aquatics Center for this 2012 event.

ANSWER: 2012 London Summer **Olympics**

15. The left side of this painting depicts a small cottage that belongs to Willy Lott while a group of people can be seen working in the field in its right background. For 10 points each:

[10] Name this 1821 painting that shows the title conveyance being drawn across the River Stour.

ANSWER: *The* **Hay Wain**

[10] *The Hay Wain* is a work by John Constable, an English painter from this early 19th century art movement that focused on individualism and emotion. Its name should not be confused with love.

ANSWER: **Romanticism** [accept **Romantic** era or period]

[10] One of the most iconic works of the Romantic era is this German artist's sublime painting *Wanderer above the Sea of Fog*. He also painted *The Sea of Ice* and *The Monk by the Sea*.

ANSWER: Caspar David **Friedrich**

16. During his pilgrimage to Mecca, Mansa Musa brought an abundant supply of this commodity, which he used as currency for souvenirs as well as for almsgiving. For 10 points each:

[10] Name this precious metal that suffered devaluation as a result.

ANSWER: **gold**

[10] Mansa Musa also restored the Sankore Madrasah and built the Djinguereber Mosque in this city, which became the center of learning and trade during the Golden Age of Mali.

ANSWER: **Timbuktu**

[10] This grandfather of Mansa Musa was the founder of the Mali Empire. His namesake epic is told through oral tradition and describes how he went from not being able to walk as a child to becoming the “Lion of Mali”.

ANSWER: **Sundiata** Keita [accept **Sunjata**]

17. Maurice Ravel’s *Boléro* features a snare drum ostinato inspired by a dance from this country. Answer some questions about that country’s influence on French music, for 10 points each:

[10] First, name that country, known for violin virtuoso Pablo de Sarasate. Isaac Albinéz and the composer of the Ritual Fire Dance, Manuel de Falla, are also from this country.

ANSWER: **Spain** [accept **España**]

[10] Sarasate composed a fantasy on this opera set in Seville in which the title gypsy girl fatally rejects Don Jose.

ANSWER: **Carmen**

[10] Another notable example of Spanish influence is this French composer’s *Symphonie espagnole*, which was written for Sarasate and actually premiered a month before *Carmen*. He is also known for a Cello Concerto in D minor.

ANSWER: Édouard **Lalo**

18. Confederate statues served as a key issue in this state’s 2017 gubernatorial race. For 10 points each:

[10] Name this state that was the site of a “Unite the Right rally” to protest the removal of the Robert E. Lee statue in Emancipation Park in its city of Charlottesville.

ANSWER: **Virginia**

[10] Calling for a removal of Confederate statues in Virginia, and taking a hard stance against President Trump, this former lieutenant governor won the gubernatorial election in Virginia.

ANSWER: Ralph **Northam**

[10] In the Virginia election, this journalist ran in the 13th district of the House of Delegates and won, becoming the first openly transgender person elected to serve as a state representative.

ANSWER: Danica **Roem**

19. This character discovers the body of Venantius, a manuscript translator and friend of the illuminator Adelmo, in a jar of pig's blood. For 10 points each:

[10] Name this protagonist, who discovers Jorge of Burgos in a secret room of a library with the comedy section of Aristotle's *Poetics*.

ANSWER: **William** of Baskerville [prompt on impartial]

[10] William of Baskerville is tasked with solving a series of strange murders at one of these places, the workplace and home of monks.

ANSWER: **monastery**

[10] William of Baskerville is the protagonist of this novel by the Italian author Umberto Eco.

ANSWER: *The **Name of the Rose***

20. Answer the following about the resurrection of Jesus Christ. For 10 points each:

[10] In Matthew, Mark, and John, this woman and suspected prostitute is the first witness to the resurrection, and she is often composited as the same woman who anointed Jesus' feet with perfume.

ANSWER: Mary **Magdalene** [prompt on "Mary"; do not accept Mary of Bethany; do not accept the Virgin Mary, Mary of Nazareth, and any answer connected to Mary the mother of Christ]

[10] One of the earliest appearances of Jesus after the resurrection was when he met two of his disciples walking on the road to this town, before revealing himself at a subsequent supper.

ANSWER: **Emmaus**

[10] When Jesus revealed himself in the upper room while breaking bread, this doubting apostle was not present and did not believe Jesus was alive until he could see and touch Jesus' wounds.

ANSWER: St. **Thomas** [accept **Doubting Thomas**, **Thomas the Apostle**, or **Didymus**]

TIEBREAKER

21. Sodium stearate, the most common component of soap, is one of these molecules, for 10 points each:

[10] Name these compounds that lower surface tension between two liquids. They can form emulsions in mixtures of solutions with opposite polarities.

ANSWER: **surfactants**

[10] The fatty acid tails of organic surfactant molecules have this property, meaning that they repel water. Nonpolar molecules have this property.

ANSWER: **hydrophobicity**

[10] These structures, composed of a lipid bilayer, are formed when surfactants are added to a mixture. Vesicles are examples of these structures, which are often contrasted with micelles.

ANSWER: **liposomes**