



The Illinois Mathematics and Science Academy of Aurora, IL presents

# IMSANITY 4

## -ROUND 7-

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## Tossups

- (1) **One character in this work ignores a “madman’s mercy” and requests to be buried with his fiance, despite his belief that his killer was going to desecrate her tomb. Another character was talked into visiting the sick, kept in quarantine, and was consequently unable to deliver a letter. One character delivers the(\*) “Queen Mab” speech on the way to a party that Rosaline will be at, and after avenging Mercutio’s death and killing Tybalt, one character in this play seeks refuge with Friar Lawrence. “In fair Verona,” the title characters take their life and bury the strife of the Montagues and Capulets. For ten points, identify this Shakespeare play about a pair of “star-crossed lovers.”**

**ANSWER:** Romeo and Juliet

- (2) **One member of this group defeated King Matur, while another member is spurned by the woman who gives him a golden circlet, Arcade. In addition to Daniel von Blumenthal and Pelleas, one member of this group ascended to heaven after being visited by Joseph of Arimathea. Another member of this group survived sitting on the chair Siege Perilous, and another was given a special girdle by(\*) Lady Bertilak. Another member of this group that contained Perceval and Bors, was tricked by Elaine of Corbenic, who disguised herself as Guinevere. For ten points, name this group of men that included Gawain, Galahad, Lancelot, and King Arthur.**

**ANSWER:** King Arthur’s Knights of the Round Table

- (3) **This scientist developed a model for the construction of the Afsluitdijk flood dam, part of which is now named in his honor. This scientist developed a “Theory of Electrons” that later developed into his theory of an immovable ether, and he also coined the term “local time”. He names the last two symmetries of the Poincare group, which are rotations and boosts. His namesake(\*) factor equals one divided by the square root of one minus beta squared, and he also names the force experienced by a point charge due to electric and magnetic fields. For ten points, identify this Dutch scientist who formulated a series of namesake transformations used in special relativity.**

**ANSWER:** Hendrik Lorentz

- (4) This event was the only running event in the women's pentathlon in the modern Olympics. Florence Griffith-Joyner set the world record in this event in the 1988 Olympic semifinals only to break that record in the finals. In the 1968 Olympics, Tommie Smith and John Carlos raised gloved fists in protest after medaling in this event. In the 1996 Olympics, Michael Johnson won this event in custom(\*) gold-colored shoes. Usain Bolt was the first man to repeat an Olympic gold medal in this event and currently holds the world record at 19.19 seconds. For ten points, name this track event in which racers sprint halfway around the track.

ANSWER: 200 meter dash

- (5) One candidate in this election wanted to set up a 300 billion dollar "rainy day fund". The top-finishing third party candidate in this election referred to his opponents as "Tweedledee and Tweedledum". Theodore Olsen and David Boies debated the Equal Protection Clause in a case that emerged in this election over issues such as "hanging chads"; the 5 to 4 decision in that case allowed(\*) Katherine Harris to certify the winner of twenty-five electoral votes from Florida. For ten points, name this election in which Ralph Nader was seen as a spoiler and Al Gore was defeated by George W. Bush.

ANSWER: United States Presidential Election of 2000

- (6) The only civilian injured in this event was James Tague. The arrest of the "Three Tramps" succeeded this event, as did the shooting death of Officer J.D. Tippit. David Ferrie was accused of involvement in this event, but Clay Shaw was the only one tried, under Jim Garrison, the District Attorney of New Orleans. This event was investigated by the(\*) Warren Commission using the Zapruder film as evidence, but the suspect was shot to death by Jack Ruby. For ten points, name this event likely perpetrated by Lee Harvey Oswald in which the President of the U.S. was shot to death in November 1963.

ANSWER: Assassination of John Fitzgerald Kennedy (accept JFK for John Fitzgerald Kennedy, prompt on a partial answer)

- (7) This artist painted three cupids on the left descending upon a character who reclines on a white bull. This artist of *The Rape of Europa* painted himself into *The Flying of Marsyas*, one of his "poesie paintings". He painted a crown of stars in the sky and the foremost figure attacked by snakes in *Bacchus and Ariadne*, and he showed Cupid by a fountain between Venus and Aphrodite in(\*) *Sacred and Profane Love*. His most famous painting sees two women search a chest while the title figure holds grapes and stares at the viewer. For ten points, identify this Italian Renaissance artist who depicted a reclining nude love goddess of love in *Venus of Urbino*.

ANSWER: Titian (or Tiziano Vecellio)

- (8) Gardner's syndrome and the FAP condition are characterized by formations on the epithelium of this organ. DCC and APC are the most common oncogenes in cancers of this structure, which can be examined through sigmoidoscopy. Sacculation forms haustra in this organ, which is divided into four sections including the "ascending" and "descending" types. In this organ, many species form(\*) mutualistic relations with microorganisms, some of which provide nutrients such as biotin and Vitamin K. For ten points, name this digestive organ that is the longest section of the large intestine and is located in between the cecum and rectum.

ANSWER: colon (prompt on "large intestine" until mentioned)

- (9) John Conway used negative powers of this number to solve the game of Desert Solitaire. The difference between powers of this number and its reciprocal is divided by the square root of five in Binet's Formula. This is the ratio of the longest to shortest side in a 36-72-72 triangle and it is the quotient of the length of a diagonal to the side length in a regular(\*) pentagon. This number, which is one more than its reciprocal, is the ratio of a line segment to its longer section when cut in extreme and mean ratio. For ten points, identify this number often called phi and equal to half of the quantity of one plus the square root of five.

ANSWER: golden ratio (accept golden mean or golden proportion, accept phi or (the quantity) one plus the square root of five (end quantity) all over two before mention)

- (10) One author from this country wrote about a painter in the 1930s in *Fire and Ice*, though she is better known for writing about Marion Bloom in *The House on Eccles Street*. This birthplace of the fictional Elizabeth Costello was the setting of a novel about characters like Dr. Halliday and Alys Brown in the poorly-named *Happy Valley*. Laura Trevelyan and the title German(\*) explorer carry on a relationship in *Voss*, and another author from this country wrote *Schindler's Ark*. The home of Patrick White and Thomas Keneally, for ten points, identify this country, in which Voss perishes in the Outback.

ANSWER: Commonwealth of Australia

- (11) The "Week of Barricades" occurred in this country, and the Jonnart Law expanded the voting base in this country. One ruler of this country hit the French Consul Pierre Deval with a fan, prompting an invasion by Charles X and the expulsion of that ruler, Hussein Dey. The Café wars were part of this country's independence movement and saw fighting from the FLN and the "blackfeet". The first president of this country was(\*) Ahmed Ben Bella, and De Gaulle granted this country its independence in the Evian Accords. For ten points, name this ethnically Berber North African nation which won its independence from France in 1962.

ANSWER: People's Democratic Republic of Algeria (accept al-Jaza'hir)

- (12) In one poem by this author, children ask the survivors of a shipwreck about the forty who drowned, and another described a letter to Belshazzar as a correspondence “the conscience of us all can read. . . On revelation’s Wall.” This poet proclaimed “if I can stop one heart from breaking, I shall not live in vain,” and described the oppression “like the weight of cathedral tunes” by “a certain slant of light.” This poet was(\*) “an inebriate of air” and “debauchee of dew” after tasting “a liquor never brewed,” and she “could not see to see,” though she “heard a fly buzz when” she died. For ten points, identify this Amherst poet who wrote “Because I could not stop for death.”

ANSWER: Emily Elizabeth Dickinson

- (13) This composer incorporated three English folk tunes, including *High Germany*, into his work *A Somerset Rhapsody*. He translated the *Rig Veda* for works like *The Cloud Messenger* and *Sita*, and wrote a work based on Walt Whitman’s poem(\*) *The Mystic Trumpeter*. This composer’s most famous work opens with a 5/4 ostinato and has its final movement played pianissimo in the orchestra before a female choir creates a fade out effect. For ten points, name this English composer of a suite with sections subtitles like *The Bringer of Jollity* and *The Bringer of War*, his *Planets* suite.

ANSWER: Gustav Holst

- (14) This data type is the output of PHP’s “explode” and Perl’s “split” command. To simulate stacks, this data type can be input into Perl’s “push” and “pop” methods. Segments can be cut out of this data structure via splicing. Hash tables can be used to implement an(\*) associative version, and in C++, this structure is iterated to simulate a multidimensional version. An “out of bound” exception can be thrown in Java when working with these structures, whose length minus one is its largest index. For ten points, name this linear data structure in which variables are indexed starting at zero.

ANSWER: array

- (15) This author advocated prevention of misbehavior in his *Psychological Care of Infant and Child*. He posited that stimuli produce a sequence of reactions in his “chain of responses” hypothesis. This man, who claimed that he could make “any type of specialist” from twelve healthy infants, adjusted the dimensions of a maze in his(\*) Kerplunk experiment. With Rosalie Rayner, he conducted his most famous experiment in which a loud noise was used to classically condition its subject to fear rats, rabbits, and beards. For ten points, name this American behaviorist who conducted the Little Albert Experiment.

ANSWER: John B. Watson

- (16) Lipids can be analyzed using a PVDF membrane after performing the HPTL form of this technique, and that variety frequently uses silica gel as the adsorbent. The Eddy-diffusion parameter and HEPT are related to the optimal velocity for this process by Van Deemter's equation. A flame ionization detector is used in one form of this technique, which in forensics is coupled with mass spectrometry. The(\*) retention factor is used in the column and planar forms of this process, whose paper variety separates pigments. A gas may be used as the mobile phase in, for ten points, this chemical laboratory technique used to separate mixtures.

ANSWER: chromatography

- (17) An equestrian statue at this location depicts a Polish king with Grunwald swords and is called *King Jagiello Monument*. An overall strap hangs off the shoulder of a boy holding a toy hand grenade in a Diane Arbus photograph taken at this location. The design for this location was called the Greensward Plan and included areas like The Reservoir and The Great Lawn. The torii of Fushima Inari inspired an installation of saffron-colored passages here called(\*) *The Gates*, a work by Christo. Designed by Frederick Law Olmsted and bounded on the south by Fifth Avenue, for ten points, identify this large public park in Manhattan.

ANSWER: Central Park (prompt on "New York (City)")

- (18) This poem describes a "waste of desert sand" and sleep "vexed to nightmare by a rocking cradle." A gaze "blank and pitiless as the sun" is held by "a shape with lion body and head of a man." One section of this poem mentions "twenty centuries of stony sleep," and the first section says that "The best lack all conviction, and the worst are full of passionate intensity" and that(\*) "the falcon cannot hear the falconer." This poem asks "What rough beast... slouches towards Bethlehem to be born," and says "Things fall apart. The centre cannot hold." For ten points, identify this apocalyptic poem by William Butler Yeats.

ANSWER: The Second Coming

- (19) Early leaders in this faith included Oliver Cowdery, who was attacked by Sidney Rigdon in the *Salt Sermon* speech and the *Danite Manifesto*. One central figure in this religion was visited as a child by Ammaron. The *Book of Moses*, *Book of Abraham*, and *Articles of Faith* are collected in this faith's text *The Pearl of Great Price*. One sacred text of this religion was written in "reformed Egyptian" and was brought by the angel(\*) Moroni to this religion's founder on golden plates. For ten points, name this religion which studies Christ's visit to ancient America whose early members included Brigham Young and Joseph Smith.

ANSWER: Mormonism or Mormons (accept The Church of Jesus Christ of Latter-Day Saints or LDS)

- (20) **One cause of this conflict was the loss of territories in the War of Saint-Sardos, and fighting began at the Battle of Cadsand. In this war, Ry and Crotoy were sites where the Earl of Shrewsbury won, but he was later captured at the Battle of Patay. This war saw a Castilian fleet win the Battle of La Rochelle, and earlier(\*) King John II was captured by Edward the Black Prince's forces at Poitiers. The tide shifted in this war when the Siege of Orleans was lifted a woman later tried as a witch. For ten points, name this war in which Joan of Arc helped France defeat England after just over a century.**

**ANSWER:** The Hundred Years' War (or La Guerre de Cent Ans)

- (21) **This artist depicted Edward James in *The Pleasure Principle* and in another work featuring a copy of *The Narrative of Arthur Gordon Pym* titled *Not To Be Reproduced*. This artist depicted a landscape painting of the field outside a window in *The Human Condition*. Another of this man's works depicts a series of houses with red roofs while men in formal attire(\*) fall from the sky, and in another work, a green apple obscures the face of another man wearing a bowler hat. The artist of *Golconda* and *Son of Man* is, for ten points, this Belgian painter of whose depicted a pipe that is not a pipe in *The Treachery of Images*.**

**ANSWER:** Rene (Francois Ghislain) Magritte

## Bonuses

- (1) This character has a sister Catherine who is “said to be very beautiful by people who know.” For ten points each:  
 [10] Identify this character who lives in the Valley of Ashes and has her nose broken when she repeats the name of her lover’s wife.  
**ANSWER:** Myrtle Wilson (accept Myrtle, prompt on “Wilson”)  
 [10] James Gatz appears in this novel by F. Scott Fitzgerald, where he failed in his attempts to convince Daisy Buchanan to leave her husband, Tom.  
**ANSWER:** The Great Gatsby  
 [10] *The Great Gatsby* was narrated by this character, who was in many ways an awful friend to Gatsby, but was one of the few people to attend his funeral.  
**ANSWER:** Nicholas “Nick” Carraway (accept any underlined portion)
- (2) The Burst and Transient Source Explorer observed this type of radiation. For ten points each:  
 [10] Name this type of radiation originating from supernovae or the collapse of stars. Those “bursts” of this type of radiation would have devastating results on the Earth’s ozone layer if one was aimed toward it.  
**ANSWER:** gamma ray (accept gamma ray bursts or GRBs)  
 [10] The “short” variety of gamma ray burst are posited to be released from the binary systems of these stars, whose mass lies above the Chandrasekhar limit. These extremely dense stars are composed almost entirely of electrically-neutral particles and can undergo starquakes.  
**ANSWER:** neutron stars (prompt on “pulsar(s)”)  
 [10] One possible source for gamma rays are these large stars that lose lots of mass through stellar wind. Gamma 2 velorum is an example of one of these stars, whose surface temperature typically exceeds 30000 Kelvin.  
**ANSWER:** Wolf-Rayet stars (or WR stars)
- (3) According to legend, this man wrestled the Bear Lake monster. For ten points each:  
 [10] Name this American folk hero, the “greatest cowboy,” who was in love with Slue-foot Sue. His lasso was the rattlesnake Shake, and he rode the horse Widowmaker.  
**ANSWER:** Pecos Bill  
 [10] As a child, Pecos Bill was raised by these animals. In Native American myth, this animal is the brother of Wolf and Raven and is a trickster god who created mankind by kicking up dirt.  
**ANSWER:** Coyote  
 [10] Slue-foot Sue rode this type of animal. In Japanese mythology, Namazu is a giant one of these who can cause earthquakes.  
**ANSWER:** Catfish (prompt on “fish”)



- (4) The Tian Yi Ge is the oldest one of these institutions, established during the Ming Dynasty. For ten points each:  
 [10] Name these institutions, one of which at Nineveh contained works on clay tablets such as the *Epic of Gilgamesh*. One of these institutions in Washington D.C. had most of its original inventory donated by Thomas Jefferson.  
**ANSWER:** library or libraries  
 [10] This Egyptian library served as the learning center of the Hellenistic culture, and after being accidentally burned down by Julius Caesar, its contents were moved to the nearby Serapeum temple.  
**ANSWER:** The Royal Library of Alexandria  
 [10] Established during the rule of the Abassid ruler al-Rashid, the House of Wisdom in this city was a center of learning until the Mongols destroyed it during an invasion.  
**ANSWER:** Baghdad, Iraq
- (5) People are talking about the Xbox One, but Microsoft has been in the game business for a while. For ten points each:  
 [10] Name this single-player card game whose Klondike variety comes pre-installed on most Windows machines. Other varieties of this card-arranging game include Spider and Pyramid.  
**ANSWER:** Solitaire  
 [10] The protagonist of this series is known as John-117 or the Master Chief. In this series, the Forerunners were destroyed by the Flood.  
**ANSWER:** Halo  
 [10] Deriving its name from a motion-control system, this game has its players take care of a Bengal tiger cub. A 2011 add-on to the game was titled *Now With Bears!*.  
**ANSWER:** Kinectimals
- (6) The poise is the unit for measuring the dynamic form of this property, which also comes in a kinematic variety. For ten points each:  
 [10] Name this property of fluid that measures its internal resistance to flow. Tar pitch takes several years to form a single drop because it has a very high value for this property.  
**ANSWER:** viscosity  
 [10] This term refers to fluids that have a uniform value of viscosity that is not dependent on stress. This term, named after an English scientist, does not apply to Bingham plastics and shear thinning fluids.  
**ANSWER:** Newtonian  
 [10] These equations can be used to model the velocity field of a flowing fluid at any location and point in time. The general form of these equations, derived from Newton's Second Law, is a form of the Cauchy momentum equation.  
**ANSWER:** Navier-Stokes equations

- (7) The protagonist lands in Carthage and sleeps with Dido, causing her suicide when she abandons him, in the first “Iliadic” half of this work. For ten points each:  
 [10] Identify this ancient epic which follows the title character’s escape after the fall of Troy and into the founding of Rome.  
**ANSWER:** The Aeneid  
 [10] *The Aeneid* is a work by this Roman poet who wrote a long poem about agriculture and beekeeping, *The Georgics*.  
**ANSWER:** Publius Vergillium Maro  
 [10] *The Aeneid* began by declaring “I sing of” these two things. George Bernard Shaw used this as the title of his play about Captain Bluntschli and Raina.  
**ANSWER:** Arms and the man (accept Arma virumque)
- (8) This branch of mathematics was launched with a book by Oskar Morgenstern and John von Neumann. For ten points each:  
 [10] Identify this branch of mathematics which studies optimal strategies. Famous examples in this field include the Monty Hall Problem and the Prisoner’s Dilemma.  
**ANSWER:** game theory  
 [10] In this game, players alternately removing pebbles from one of several piles until all pebbles have been claimed. Its optimal strategy involves writing the sizes of the piles in binary numerals.  
**ANSWER:** Nim  
 [10] A variant of Nim is one in which players take turns removing one or two stones from a single pile with the player removing the last stone winning. The second player will win this game exactly when the initial number of stones is divisible by this number. This game commonly starts at 21.  
**ANSWER:** three (accept any equivalents)
- (9) This artist’s *Mond Crucifixion* controversially includes a sun and moon. For ten points each:  
 [10] Identify this Italian Renaissance painter who included Dante Alighieri in *La Disputa* and Plato and Aristotle in *The School of Athens*.  
**ANSWER:** Raphael (or Raffaello Sanzio da Urbino, accept any underlined part)  
 [10] This artist, who rejected the techniques of Raphael alongside William Holman Hunt and John Everett Millais, painted a woman modeled after his wife Elizabeth Siddal praying in *Beata Beatrix*.  
**ANSWER:** Dante Gabriel Rossetti  
 [10] Rossetti depicted this Early Renaissance artist painting a fresco of Dante Alighieri. This pupil of Cimabue painted *The Marriage at Cana* and the Madonna with child in *The Ognissanti Madonna*.  
**ANSWER:** Giotto di Bondone (accept either underlined part)

- (10) This conflict saw the death of Major James McFarlane at Bower Hill, and it was put down by Lighthorse Harry Lee and George Washington. For ten points each:  
 [10] Name this violent 1790s protest which started after a tax passed on the namesake alcohol was put into place. It ended after a convention at Parkinson's Ferry, and featured the poorly equipped Watermelon Army.  
**ANSWER:** Whiskey Rebellion  
 [10] The Whiskey Rebellion primarily took place in the western portion of this state. Rioters in Fries's Rebellion were mainly of this state's namesake "Dutch" ethnicity, which originally settled near Philadelphia.  
**ANSWER:** Pennsylvania  
 [10] The recipient of much of the anger of the Whiskey Rebellion was this tax collector whose home at Bower Hill was burned down. An effigy of this man was burned by protesters early in the Rebellion.  
**ANSWER:** John Neville
- (11) One of the founders of this philosophical school allegedly told Alexander the Great to stop blocking the sunlight after he came to visit. For ten points each:  
 [10] Name this ancient school of philosophy that included Diogenes of Sinope, who pursued shamelessness and austerity as part of his life.  
**ANSWER:** Cynicism  
 [10] Cynic philosophers believe that this concept is the only requirement for happiness. In the *Nicomachean Ethics*, this state exists intermediate of having too much and too little. It is often contrasted with vice.  
**ANSWER:** Virtue  
 [10] This student of Socrates is the founder of Cynicism. He advised repressing desires to indulge in external goods, such as wealth, in favor of internal goods, and his education under Giorgias is evident in his works *Ajax* and *Odysseus*.  
**ANSWER:** Antisthenes
- (12) Salts of this compound contain it in its cation form and, if it is fully substituted with alkyl groups, it is deemed a quaternary salt. For ten points each:  
 [10] Name this compound with formula  $\text{NH}_3$ , whose concentration is measured by density on the Baumé scale. It is the primary form of nitrogenous waste in marine life and is also a household cleaning item.  
**ANSWER:** ammonia  
 [10] Ammonia is the solvent for this eponymous reaction, which converts benzene into 1,4-cyclohexadiene by reduction with sodium or lithium  
**ANSWER:** Birch reduction  
 [10] The large scale production of ammonia was first achieved in Germany just before World War I with this doubly-eponymous process that originally made use of an osmium catalyst.  
**ANSWER:** Haber-Bosch process

- (13) One character in this novel dies while he's attempting to swallow a Nazi party pin, and Roswitha dies during a bombing when she goes to get a cup of coffee. For ten points each:  
 [10] Identify this novel about Oskar Matzerath, who chooses to stop growing when he is three and is given the title object.  
**ANSWER:** The Tin Drum (or Die Blechtrommel)  
 [10] *The Tin Drum* is a work in the Danzig trilogy of this German author. He wrote about Joachim Mahlke in *Cat and Mouse* and Walter Matern and Edouard Amsel in *Dog Years*.  
**ANSWER:** Gunter Wilhelm Grass  
 [10] In *The Tin Drum*, Oskar learned to read with a book of Goethe and a book about this man. This faith healer to Alexei Tsarevich intrigued Oskar more with his free sexual practices than with the many attempts to kill him.  
**ANSWER:** Grigori Yefimovich Rasputin
- (14) Jesus traveled to Judea to "wake him up". For ten points each:  
 [10] Identify this man, the brother of Mary and Martha, whom Jesus raised from the dead after four days.  
**ANSWER:** Lazarus  
 [10] The story of Lazarus was told in this non-synoptic gospel, whose verse 3:16 claims that "God so loved the world that he gave his only Son, that whoever believes in him shall not perish but have eternal life."  
**ANSWER:** The Gospel According to John (or Book of John)  
 [10] The shortest verse in the King James Version of the Bible is this one, which tells of Jesus's actions immediately before raising Lazarus.  
**ANSWER:** "Jesus wept." (or John 11:35, or anything tersely stating that Jesus cried because of various translations)
- (15) Pius VI traveled to this man's throne in hopes of causing him to stop destroying monasteries, but he did not change his policies. For ten points each:  
 [10] Name this reforming monarch who allowed for Jews to own land and be nobles with his Edict of Toleration and partitioned Poland with Catherine the Great and Frederick the Great.  
**ANSWER:** Joseph II of Austria  
 [10] Joseph II was the son of this Austrian queen, whose legitimacy via the Pragmatic Sanction was deemed a violation of Salic law and was contested in the War of the Austrian Succession.  
**ANSWER:** Maria Theresa of Austria  
 [10] Maria Theresa lost most of this prosperous mining province during the War of the Austrian Succession, with the remaining fragments becoming merged with Moravia.  
**ANSWER:** Silesia

- (16) This period was ushered in with a speech given on the 20th “Victorious February”, and it resulted with the Warsaw Pact invading and taking the Ruzyně International Airport. For ten points each:  
 [10] Name this period of reform in 1968 which tried to bring about “socialism with a human face” in Czechoslovakia.  
**ANSWER:** Prague Spring (accept Praska Jaro)  
 [10] After a period of “normalization” was put in place, this man was replaced by Gustav Husak as the Secretary of the Communist Party in Czechoslovakia. He was later placed in the cabinet of the playwright Vaclav Havel after the fall of communism.  
**ANSWER:** Alexander Dubček  
 [10] Dubček initiated this plan during the Prague Spring which called for socialist-leaning economic reforms and included the recognition of Israel and freedom of speech.  
**ANSWER:** Action Programme
- (17) Bacterial conjugation involves the exchange of these entities through the use of a sex pilus. For ten points each:  
 [10] Name these circular molecules of DNA that remain independent from chromosomal genetic material. They are used as cloning vectors in recombinant DNA technology.  
**ANSWER:** plasmid  
 [10] Certain plasmids allow horizontal gene transfer of this property between different species of bacteria, such as MRSA.  
**ANSWER:** antibiotic resistance (accept multidrug resistance, prompt on “(drug) resistance”)  
 [10] This plasmid allows bacteria to exchange genetic material through conjugation. When it is incorporated into a bacterial chromosome, the bacterium is classified as an Hfr cell.  
**ANSWER:** F plasmid (or fertility factor)
- (18) The narrator is requested to have the Birds and Bees talk with Reginald Cardinal, and misinterprets the contents of his briefcase as a result. For ten points each:  
 [10] Identify this novel which sees the butler Stevens drive across England to meet Miss Kenton, who had worked for him under Lord Darlington.  
**ANSWER:** The Remains of the Day  
 [10] *The Remains of the Day* was written by this British author, who wrote about Kathy reminiscing about Ruth, Tommy, and their time in and out of Hailsham in *Never Let Me Go*.  
**ANSWER:** Kazuo Ishiguro  
 [10] Ishiguro wrote a novel titled for one of these people of the floating world, named after the traditional form of ukiyo-e. In that novel, Masuji Ono is discouraged from this profession when his father burns his paintings, but says “the only thing he’s succeeded in kindling is my ambition.”  
**ANSWER:** artist (accept equivalents like painter, do not accept “curator”)

- (19) The *Troika* movement appears in this composer's suite for a Soviet film, *Lieutenant Kije*. For ten points each:

[10] Identify this Russian composer who composed the *Dance of the Knights* for his ballet *Romeo and Juliet* and used a clarinet to depict a cat in his *Peter and the Wolf*.

**ANSWER:** Sergei Sergeyevich Prokofiev

[10] Prokofiev also wrote this opera in which Tchelio tells the Prince and Truffaldino to find the titular objects in order to cure the Prince's sickness. This opera ends with the Prince marrying Ninette.

**ANSWER:** Love for Three Oranges (or L'amour des trois oranges)

[10] This man staged a number of Prokofiev's works, including *Chout*. This director of the Ballet Russes also staged Stravinsky's *Firebird* and *The Rite of Spring*.

**ANSWER:** Sergei Pavlovich Diaghilev

- (20) This region is home to a nature reserve at the ancient city of Gamla. For ten points each:

[10] Name this plateau region is shared between Israel and Jordan. Mount Hermon, part of the Anti-Lebanon range, can be found at the northern end of this region, whose southern border is defined by the Yarmouk River and the Sea of Galilee.

**ANSWER:** Golan Heights (or Syrian Golan)

[10] The Yarmouk River is a tributary of this river flowing out of the Sea of Galilee. This river marks the eastern border of the West Bank and is joined by the Jabbok River near the end of its course.

**ANSWER:** Jordan River

[10] The Jordan River flows into this lake, named for the lack of life due to its extreme salt content. This lake features the lowest land elevation on Earth since it lies in the Jordan Rift Valley.

**ANSWER:** Dead Sea

- (21) This group absorbed the smaller Order of Dobrzyn. For ten points each:

[10] Name this crusading order of knights, the loser of the Battle on the Ice near Lake Peipus. At one point led by Ulrich von Jungingen, this group's name alludes to its Germanic roots.

**ANSWER:** Teutonic Knights (accept Teutonic Order or Order of Brothers of the German House of Saint Ma

[10] The aforementioned Ulrich von Jungingen died at this battle, a severe blow to the Teutonic Knights which saw a Polish-Lithuanian force emerge victorious.

**ANSWER:** First Battle of Tannenberg (also accept Battle of Grunwald)

[10] The First Battle of Tannenberg saw the death of Nikolaus von Renys, the founder of this group that opposed the Teutonic Knights. It fought for the transfer of the Chelmno region from the Teutonic Knights to Poland.

**ANSWER:** Lizard League (accept Lizard Union)