

Minnesota Undergraduate Tournament 2015: My Torah Portion was an Archie Comic
Questions by Rob Carson, Mike Cheyne, Andrew Hart, Gautam Kandlikar, Shan Kothari, Bernadette Spencer, Cody Voight, and special guest Ike Jose
Packet 04: Tossups

1. A color-changing calf in this man's herds was discovered by Polyeidus, who also found an herb to resurrect this man's son Glaucus. Later mythographers claimed that there were two versions of this character, a "good" one and a "bad" one, whose rules were separated by that of Lycastus. While waging war on Megara, he convinced Scylla to cut an invulnerability-granting lock of hair off of King Nisus. Like his half-brother Aeacus and his brother Rhadamanthus, he became a (*) judge of the dead. He died after having boiling water poured over him by the daughters of Cocylus, who were protecting Daedalus from him. This father of Ariadne and Phaedra demanded that king Aeacus send him 14 youths every year as tribute to feed a monster living in his labyrinth. For 10 points, name this husband of Pasiphae, a king of Crete.

ANSWER: Minos

2. A key factor in this battle was Thomas Mullins' failure to remember to bring ladders, which led to his later court martial. A group of Ursuline nuns prayed to a devotional image titled "Our Lady of Prompt Succor" prior to this battle. The winning side here received supplies from the steamboat *Enterprise*, which soon after made a historic trip to Brownsville. The losing side in this battle had earlier acquired a landing zone in the Battle of Lake Borgne, and its commander, Edward (*) Pakenham, died during it. Pirate Jean Lafitte was pardoned for his service in this battle, which technically ended several days after the signing of the Treaty of Ghent. For 10 points, name this military victory for Andrew Jackson, the final major battle of the War of 1812.

ANSWER: Battle of New Orleans

3. Kenneth MacMillan's 1965 version of a ballet by this composer provided a career renaissance for Margot Fonteyn. The second act of a ballet by this composer ends shortly after a piece in which fifteen straight timpani strikes indicate a character's death. Another of his ballets includes a dance for "Grasshoppers and Dragonflies" in the middle of four dances for seasonal fairies. Yuri Fayer convinced this man to restore the (*) original ending of a ballet that includes a part for tenor saxophone. Robert Helpmann and Frederick Ashton premiered the travesty roles of the stepsisters in the latter's version of a ballet by this composer, who quoted the gavotte from his *Classical Symphony* in a ballet that also includes the famous "Dance of the Knights". For 10 points, name this Russian composer of the ballets *Cinderella* and *Romeo and Juliet*, who also wrote *Peter and the Wolf*.

ANSWER: Sergei Prokofiev [or Sergei Sergeyevich Prokofiev]

4. In a flashback, the title character of a novel by this man kicks a pregnant dog, causing it to miscarry, after learning of the disappearance of his parents. This man founded a group whose first performance, in a zoo's snake pit, gave them their name, "the Serpent Players". The protagonist of a novel by this author hangs out with a gang including Butcher and Boston and is given a three-month-old baby during a mugging. In a play by this man, the idea of "a world without collisions" is discussed by a character who practices (*) ballroom dancing, shortly after Darwin and Tolstoy are proposed as examples of "men of magnitude". The news of his father's return prompts the title character of that play to lash out at the African servants Willie and Sam. For 10 points, name this South African author of *Tsotsi* and "Master Harold"...and the Boys.

ANSWER: Athol Fugard [or Harold Athol Lanigan Fugard]

5. This material's alpha form transitions from body-centered cubic to face-centered cubic at 912 degrees celsius. Its phase diagram shows a eutectoid point at 0.76% weight concentration of its lesser substituent at 722 degrees celsius, and a eutectic point at 4.30% weight concentration at 1147 degrees celsius. A diffusionless transformation occurs between a face-centered cubic phase of this material, sometimes called its gamma-phase form, and a harder, body-centered tetragonal form of this material. In that transition, this material shifts from its (*) austenite to its martensite form. This material is cooled by quenching after carbon monoxide or barium carbonate are used to give it a desirable property via the process of carburization. When over 10.5% chromium is added to this material, it becomes extremely corrosion-resistant. For 10 points, name this alloy of iron and carbon that has a "stainless" variant.

ANSWER: steel

6. A poem by this author includes the image of “gamins, pursuing the scientist down the tiled colonnade” after describing a poet’s unease at those who “doubt his antimythological myth”. The speaker of that poem by this man tries to imagine “a faultless love or the life to come”, which causes him to hear “the murmur of underground streams”. Another of his poems ends a list with “My noon, my midnight, my talk, my song” before the speaker laments “I thought that (*) love would last forever; I was wrong”. He concluded that “we must love one another or die” in a poem set “in one of the dives on Fifty-second Street” on the eve of World War II, and opened another with the line “Stop all the clocks, cut off the telephone.”. For 10 points, name this poet of “In Praise of Limestone”, “Funeral Blues”, and “September 1, 1939”.

ANSWER: W.H. Auden [or Wystan Hugh Auden]

7. The stoichiometric ratio of carbon to this element to phosphorus is 106 to 16 according to the well-known Redfield ratio. Important work on the source of this element in soils was done by Martinus Beijerinck, who discovered the *Beijerinckia* and *Azotobacter* bacteria. A surprise microbial impact on this element was found in the discovery of the anammox process, in which hydrazine is produced as an intermediate. Anthropogenic eutrophication creates excessive amounts of this element and (*) phosphorus. A significant source of this element found in soils is due to the action of *Rhizobium* bacteria in legumes and other plants. The Haber-Bosch process allowed the inorganic creation of a compound with this element, which could then be used as a fertilizer. For 10 points, name this element “fixed” to ammonia that makes up the majority of the Earth’s atmosphere.

ANSWER: nitrogen [or N]

8. To describe protectionist policies that limited market activities that added value to this commodity, Lloyd Best coined the term “Muscovado bias.” In a country where the MINAZ department is tasked with administering production and marketing of this commodity, an essay by Alvaro Reynoso on the scientific management of its crop brought major gains in the production of this commodity. It is produced in a partially processed (*) “Turbinado” form. Benjamin Delessert pioneered the industrial-scale extraction of this commodity which was first developed by Augustin Marggraff and used beet as the raw material. This commodity was brought to Europe and New England via the triangular trade in the form of molasses. For 10 points, identify this commodity once called “white gold.”

ANSWER: sugar [accept “sugarcane” until “extraction”; anti prompt on “molasses” until mentioned]

9. Hans Kung has harshly criticized this meeting’s most controversial decision, which was explicitly reaffirmed in the later *Lumen Gentium*. This meeting’s *Pastor Aeternae* officially documented the Church’s belief in Peter’s primacy over the other apostles. It was preceded by a document which outlined reprehensible contemporary trends like rationalism and atheism. This council was called by the author of the (*) Syllabus of Errors and was cut short by the Franco-Prussian War. This council officially asserted the pope’s right to proclaim doctrines *ex cathedra*, which makes them free from human error and was called by Pius IX. For 10 points, name this 1869-1870 century ecumenical council that established papal infallibility and shares its name with the city the Pope lives in.

ANSWER: Vatican I [or First Vatican Council; or Concilium Vaticanum Primum]

10. On a 2014 song, this band sings “If there is a light / You can always see / And there is a world / We can always be.” This band’s singer assured fans that it would not be a great loss to Western civilization that he may never play guitar again after shattering his elbow in a New York City cycling accident. This band, which released “Song for Someone,” described hearing “The most beautiful sound I ever heard” on “The (*) Miracle (of Joey Ramone).” This band achieved the highest-grossing concert tour ever with its two-year-long 360° Tour. In 2014, it drew ire from iTunes users when its album *Songs of Innocence* was added to their music libraries. The singer counts off “Uno, dos, tres, catorce!” on their song “Vertigo,” and they also released the albums *The Joshua Tree* and *Achtung Baby*. For 10 points, name this Irish rock band fronted by Bono.

ANSWER: U2

11. In one essay, this thinker argued that Lumumba's mistake was to trust the impartiality of the UN. This thinker criticized Mannoni's claim that the Malagasy had a dependency complex in a book that describes how he came to view his body from the third-person after people said things like "Look, a Negro!" In that work, he discusses how the subject internalizes inferiority complexes through (*) epidermalization and appropriates foreign cultures. This thinker used case studies from Algerian hospitals to show the psychological effects of the war for independence in a work that emphasizes the revolutionary potential of the lumpenproletariat. Jean-Paul Sartre wrote an introduction to that work that claims "violence can heal the wounds that it has inflicted." For 10 points, name this Martinican author of *Black Skin, White Masks* and *The Wretched of the Earth*.

ANSWER: Frantz Omar Fanon

12. Ernest Hamel wrote an early, sympathetic biography of this man, whose private papers were burned by Simon Duplay, the son of this man's ardent follower Eleonore. A commission led by Edme-Bonaventure Courtois was responsible for documenting the works of this man. Louis de Saint-Just was a close ally of this man. He established a secret "General Police Bureau" months before passing a law that limited the rights of people who appeared before the (*) Revolutionary Tribunal. He attempted to commit suicide and holed himself up in the Hotel de Ville shortly after he was elected President of the Convention. He was arrested and executed during the Thermidorian reaction, and he was a member of the Committee of Public Safety. For 10 points, identify this man who presided over the Reign of Terror during the French Revolution.

ANSWER: Maximilien Robespierre [or Maximilien François Marie Isidore de Robespierre]

13. One of these animals was depicted as a giant boiler in front of a headless nude female torso in a 1921 painting. The moon is shown between the legs of one of these creatures while two tigers and a fish jump at a sleeping nude woman in a 1944 painting. A Gian Lorenzo Bernini sculpture showing one of these animals carrying an obelisk on its back inspired a painter to show them with massive stork legs in many of his works, including four of them in *The* (*) *Temptation of St. Anthony* and one of them in the background of *Dream Caused by the Flight of a Bee Around a Pomegranate a Second Before Awakening*. The gnarled branches of dead trees become the legs, and the curved necks of birds become part of the faces, of images of these animals in the water of another painting. For 10 points, name these large mammals that swans are shown "reflecting" in a painting by Salvador Dali.

ANSWER: elephants

14. This region has the highest concentration of glucocorticoid receptors in the brain. One oscillatory pattern found in this brain region features large-amplitude, aperiodic sharp waves, followed by fast ripples. Large Irregular Activity and theta waves are two of this region's slow wave patterns. The fornix carries signals from here to the mammillary bodies. Long-term potentiation was discovered in this region, which consists of (*) four subregions named for this structure's former name, "Ammon's horn." The phenomenon of replay was discovered in this region's place cells. This region forms a namesake formation with the subiculum and the dentate gyrus. Damage to this structure can cause anterograde amnesia, revealing its role in consolidating memory. For 10 points, name this part of the limbic system in the medial temporal lobe, the Greek for "seahorse."

ANSWER: hippocampus

15. This poem's subject was described as "the determining focus of relation" by Helen Vendler. The third section of this poem refers to an event as "a small part of the pantomime", while a later section describes icicles filling a window with "barbaric glass" and "the mood" tracing "in the shadow / an indecipherable cause". The speaker of this poem can't decide whether to prefer "the beauty of (*) inflections or the beauty of innuendoes", and claims to know "noble accents / and lucid, inescapable rhythms". Its seventh section mentions the "thin men of Haddam", while its fourth section notes that "a man and a woman and" the title creature "are one". For 10 points, name this Wallace Stevens poem about various perspectives on a certain avian.

ANSWER: "Thirteen Ways of Looking at a Blackbird"

16. This ruler corresponded vitriolically with a former friend, Andrey Kurbsky, who became a Lithuanian turncoat. One military action ordered by this ruler resulted after Archbishop Pimen was accused of treason. This ruler established at Kitai-gorod his country's first printing press, called the Print Yard. This ruler ordered the Sack of Novgorod during the Livonian War and established a secret police called the (*) *oprichniki*. This man was succeeded by the feeble-minded Feodor I, the last of his line, after he killed his intended heir by striking him on the head with a scepter. In 1547, he became the first ruler to convert the title of Grand Prince of Moscow to Tsar of Russia. For 10 points, name this Rurikid tsar of Russia, whose epithet refers to his might, not his horribleness.

ANSWER: Ivan the Terrible [or Ivan IV; or Ivan Vasilyvich; or Ivan Grozny; prompt on "Ivan"]

17. In 1979, UKIRT, IRTE, and CFHT all began operating at this place. UH2.2, the first instrument to be controlled by a computer, showcased the feasibility and desirability of this location. The westernmost member of the Very Long Baseline Array is located here, which is the location of the northernmost of the two Gemini Telescopes. An array of eight radio telescopes in this location was built to operate as a submillimeter interferometer in conjunction with the Caltech Submillimeter Observatory and James Clerk (*) Maxwell Telescope. This location hosts twin telescopes that are the largest optical and IR instruments in the world at its Keck Observatory. The two most important US sites for ground-based astronomy are Kitt Peak and this location. For 10 points, name this dormant volcano in Hawaii that is the site of numerous astronomical observatories.

ANSWER: Mauna Kea [prompt on: Hawaii, United States]

18. This man's second symphony ends with a trumpet playing "Reveille," leading to the final chord, where 11 of the 12 notes are played at once. This composer's fourth symphony splits the orchestra in a section playing in 3/2 and another in accelerating 4/4 in the second movement, based on his piano work *The Celestial Railroad*. In a piece by this composer, offstage strings play quiet chords, over which a (*) trumpet plays a phrase seven times. He quoted "Yankee Doodle" in multiple keys in the movement "Putnam's Camp." Beethoven's Fifth is quoted in every movement of a piece whose second movement, "Hawthorne," makes a cluster chord with a 14 3/4-inch long block of wood. For 10 points, name this American composer of *The Unanswered Question*, *Three Places in New England*, and the *Concord Sonata*.

ANSWER: Charles Edward Ives

19. This thinker discusses the ambivalence of "pharmakon" in an essay on *Phaedrus*, "Plato's Pharmacy." The two columns of another of this philosopher's works juxtapose a dissection of Hegel with a celebration of Jean Genet's writings. He called for resistance to the "ontologization" of Marx through a "New International." This author of *Glas* caused a sensation at a Johns Hopkins conference with his paper (*) "Structure, Sign, and Play." This author of *Specters of Marx* denoted a form of language prefiguring both speech and writing as "arche-writing," enlisting it in his critique of logocentrism. In *Speech and Phenomena*, he critiqued Husserl's "metaphysics of presence" through the notion of *différance*. For 10 points, name this Algerian-born French philosopher who wrote *Of Grammatology* and developed deconstruction.

ANSWER: Jacques Derrida

20. Six poems excised from this man's major collection, including "The Jewels" and "The Vampire's Metamorphoses," were published as *Les Épaves*, or "Scraps." This author's discussion of "the transitory, the fugitive, the contingent which make up one half of art," in an essay on the painter Constantin Guys titled "The Painter of Modern Life," is credited with developing the concept of "modernity." He dedicated to Victor Hugo a poem beginning "Andromache, I think of you!" entitled "The (*) Swan." He compared a poet to a "price of cloud and sky," a large bird whose "giant wings prevent him from walking," in the poem "The Albatross," which appears in a collection he addressed to a "hypocritical reader" that contains the sections "Wine" and "Spleen and Ideal." For 10 points, name this French poet of *The Flowers of Evil*, or *Les Fleurs du Mal*.

ANSWER: Charles [Pierre] Baudelaire

TB. This author helped arrange a visa for the painter David Siqueiros after the latter was accused of involvement in the Trotsky assassination, and he once fled to Europe using Miguel Angel Asturias's passport. He wrote of "burying lamps in the deep solitude" in his poem "Thinking, Tangling Shadows" and described a woman as "the frenzied youth of the bee, the drunkenness of the wave" in "Girl Lithe and Tawny". He lamented that "the (*) night is starry and she is not with me" in the penultimate poem of a collection that ends with a poem set at "the hour of departure" in which he repeats the line "In you everything sank!" That collection includes a poem that begins "Tonight I can write the saddest lines". For 10 points, name this Chilean poet of *Twenty Love Poems and a Song of Despair*.

ANSWER: Pablo Neruda [or Neftali Ricardo Reyes Basoalto]

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Packet 04: Bonuses

1. In 1991, Bernard Chazelle developed an algorithm to generate these objects from a mesh, but no one has ever implemented it since it is too complex. For 10 points each:

[10] Name these shapes, “fans” and “strips” of which are specified to save overhead in OpenGL.

ANSWER: **triangles**

[10] That algorithm by Chazelle runs with this, tight-bound, big O asymptotic complexity. It’s also the runtime of a naïve brute force search of a list with n elements.

ANSWER: **linear** [or “**big O of n**”]

[10] The linear time Boyer-Moore algorithm searches through these data types and is well-suited for detecting plagiarism. These data types hold text.

ANSWER: **strings**

2. This set of letters is known as the Tetragrammaton and is often pronounced “Jehovah”. For 10 points each:

[10] Give this four letter combination or its common pronunciation that is one of the names of God in the Hebrew Bible.

ANSWER: **YHWH** [or **Yahweh**; or **Yehowah**]

[10] This term is often said aloud in place of YHWH. It is the Aramaic term for “Lord”.

ANSWER: **Adonai**

[10] Some Orthodox and Ultra-Orthodox Jews eschew all of the above, preferring to refer to God by this term, which is Hebrew for “the name”.

ANSWER: **Hashem**

3. Captain Black often sleeps with this extremely tired character to piss off her usual love interest. For 10 points:

[10] Identify this character who is constantly hounded by her kid sister, and who continually attempts to stab Yossarian as revenge for the death of her lover.

ANSWER: **Nately’s whore** [prompt on partial answer; accept equivalents like “the **prostitute** that **Nately** loves” as long as they mention both the underlined names/concepts]

[10] Yossarian is actually stabbed by Nately’s whore near the end of this 1961 Joseph Heller novel about a fictional Air Force unit based on Pianosa.

ANSWER: **Catch-22**

[10] An unusually serious scene from *Catch-22* centers on the gruesome death of this crewman on Yossarian’s plane, whose organs fall out of a huge flak wound. In another scene, Yossarian makes a Villon-referencing pun on this man’s name.

ANSWER: **Snowden** [accept “Where are the **Snowdens** of yesteryear?”]

4. This regime effectively came to power when Antonio Maria da Silva was ousted as Prime Minister and Oscar Carmon assumed the presidency in 1926. For 10 points each:

[10] Identify this regime which ruled Portugal from the 1930s through the 1970s.

ANSWER: **Estado Novo**

[10] This man was Prime Minister of Portugal for much of the existence of the Estado Novo. He co-wrote the 1933 Portuguese constitution with his eventual successor Marcelo Caetano.

ANSWER: Antonio de Oliveira **Salazar**

[10] In the early part of Salazar’s rule, he was opposed by adherents of this fascist movement, which put the Catholic church front and center. Followers of this corporatist philosophy called themselves Blue Shirts.

ANSWER: National **Syndicalism** [accept word forms]

5. When the violas and clarinets recapitulate the theme of this piece's first movement, they are paralleled by the flute an octave and a fifth higher and the piccolo two octaves and a third higher. For 10 points each:

[10] Name this work by Paul Hindemith based on melodies from the namesake composer's piano duets and incidental music for *Turandot*. The end of its Andantino third movement features a difficult flute solo.

ANSWER: **Symphonic Metamorphosis of Themes** by Carl Maria von **Weber** [be generous about prepositions]

[10] Carl Maria von Weber wrote two concerti for this single-reed instrument, a descendant of the chalumeau. A cadenza links the two movements of Aaron Copland's concerto for this instrument, written for Benny Goodman.

ANSWER: **clarinet**

[10] Weber's *Invitation to the Dance* was orchestrated by this author of *Treatise on Instrumentation*. This composer of the *Grande messe des morts* wrote a work whose *idée fixe* represents Harriet Smithson.

ANSWER: Hector **Berlioz**

6. Answer some questions about what happens when parties in a case are in different states, for 10 points each:

[10] A 2005 act imposed rather minimal diversity requirements for these types of suits, in which a party is sued collectively by a large group. *Wal-Mart v. Dukes* is the largest one to date.

ANSWER: **class action** [or **class suit**]

[10] This doctrine states that federal courts sitting in diversity jurisdiction must apply federal procedural law and state substantive law. It is named for a 1938 railroad case in the Supreme Court that overturned *Swift v. Tyson*.

ANSWER: **Erie** doctrine [or **Erie Railroad Co. v. Tompkins**]

[10] This man wrote *Federalist No. 80*, which proposed that cases involving "the peace of the confederacy" be heard in federal courts. He also wrote most of the rest of *The Federalist Papers*.

ANSWER: Alexander **Hamilton**

7. These compounds can be formed via step-growth or chain-growth reactions. For 10 points each:

[10] Name these macromolecules composed of repeated subunits. One molecule of this type, polyethylene, is a common plastic made up of repeated ethylene molecules.

ANSWER: **polymers**

[10] Polymer synthesis from alkenes can be catalyzed using these catalysts, which typically contain organoaluminum compounds, and are named for their German and Italian discoverers.

ANSWER: **Ziegler-Natta** catalysts

[10] A chromium-containing catalyst used to make most of the world's polypropylene is named for this petroleum company, where polymer inventors Robert Banks and Paul Hogan both worked.

ANSWER: **Phillips** Petroleum Company [accept **Phillips catalyst**]

8. This group's name was changed by leader H. Rap Brown. For 10 points each:

[10] Name this group also led by men such as Stokely Carmichael. It organized such campaigns as "Freedom Summer," which challenged unequal voting rights.

ANSWER: **SNCC** ["Snick"; or **Student Nonviolent Coordinating Committee**; or **Student National Coordinating Committee**]

[10] SNCC helped to organize a 1963 march on this city, where Martin Luther King Jr. gave his famous "I Have a Dream" speech.

ANSWER: **Washington** D.C. [or **D.C.**; or **District of Columbia**]

[10] One catalyst for SNCC's shift away from nonviolence was the shooting of this man during his solo March Against Fear. This man was the first black student admitted to the University of Mississippi.

ANSWER: James Howard **Meredith**

9. This character tells Brakenbury about a prophetic dream in which he sees “a thousand fearful wrecks” and “Ten thousand men that fishes gnaw'd upon” after his brother pushes him overboard and he drowns. For 10 points each:
[10] Name this character who is stabbed and drowned in a butt of Malmsey wine by a pair of murderers sent by his brother, the soon-to-be Richard III.

ANSWER: George, Duke of Clarence [prompt on George; accept George Plantagenet, 1st Duke of Clarence, 1st Earl of Salisbury, 1st Earl of Warwick]

[10] *Richard III* opens with the title character describing the accession of Edward IV by stating that this four-word phrase has been “made glorious summer by this sun of York.” It titles John Steinbeck’s last novel.

ANSWER: the winter of our discontent

[10] Catesby, Ratcliffe, and Lovell help Richard and Buckingham spread the rumor that these characters are illegitimate of birth; when this proves ineffective, Richard sends James Tyrrell to kill them.

ANSWER: the Princes in the Tower [or Richard III’s two nephews; or the eldest two sons of Edward IV; or Edward, Prince of Wales and Richard, Duke of York; prompt on “Edward and Richard”]

10. Answer the following about the legendary warrior prince Yamato Takeru, for 10 points each.

[10] As the son of the Emperor Keiko, Yamato Takeru was a twelfth-generation descendant of this first legendary emperor of Japan, who was guided by a three-legged crow to the province of Yamato.

ANSWER: Jimmu Tenno [or Kamu-Yamato-iware-biko]

[10] Like the rest of the line of Jimmu, Yamato Takeru was said to be descended through Ninigi from this *kami* of the sun, who often feuded with her brother Susano’o.

ANSWER: Amaterasu-omikami [or Ohirume-no-muchi-no-kami]

[10] Yamato-Takeru subjugated the rebellious eastern provinces with the help of the sword Kusanagi, which Susano’o had originally taken from the body of this eight-headed dragon.

ANSWER: Yamata-no-Orochi

11. The LBK culture, which was a neolithic culture in Eastern Europe, are named for the patterns they engraved into this type of objects. For 10 points each:

[10] Name this type of object. Edward Morse named the Jomon culture of ancient Japan after he discovered many remains of this type of object with cord-markings in them.

ANSWER: pottery [or pots or ceramic or earthenware or stoneware or porcelain]

[10] Ancient pottery from what became this modern-day country was often decorated in the black-figure style, which was popularized in Corinth, or the red-figure style, which originated in Athens.

ANSWER: Ancient Greece [or Hellas; or the Hellenic Republic; do not accept things like “Attica”]

[10] This former imperial residence, which is now a museum, contains a large collection of Chinese and Japanese porcelain in its Matbah i-Amire. Its European Collection also contains a decanter produced as a gift for its last resident, Abdulhamid II.

ANSWER: Topkapi palace [or Topkapi Sarayi]

12. Before 1889, this train service’s eastern terminus was Varna, Bulgaria. For 10 points each:

[10] Identify this train service whose original route connected Paris to Istanbul, so named because it connected Western Europe to the East.

ANSWER: Orient Express [or Express d’Orient]

[10] The Orient Express was operated by this company, founded by Belgian Georges Nagelmackers, whose French name literally means “International Sleeping Car Company.”

ANSWER: Compagnie Internationale des Wagons-Lits (VAH-guns LEES) [or CIWL]

[10] Nagelmackers was inspired to create the Wagon-Lits after observing this U.S. rail magnate’s sleeping cars. An 1894 strike of this man’s sleeping-car porters began in a namesake Illinois town that is now a part of Chicago.

ANSWER: George [Mortimer] Pullman

13. The iChip method was used to discover one of these compounds called teixobactin that is claimed to be less susceptible to resistance because it binds to the conserved lipids II and III. For 10 points each:

[10] Name this type of bacteria-killing chemical which also includes vancomycin and methicillin.

ANSWER: antibiotics [or antibacterials; prompt on “antimicrobial”]

[10] The majority of natural antibiotics discovered to date come from this largest genus of Actinobacteria, with over 500 species. They are usually found in soil and produce the earthy-smelling metabolite geosmin.

ANSWER: Streptomyces

[10] Lipid II and lipid III are precursors of this polymer of beta-(1,4) linked N-acetylglucosamine and N-acetylmuramic acid, which makes up the majority of the bacterial cell wall.

ANSWER: peptidoglycan [or murein]

14. Answer the following about *Star Trek II: The Wrath of Khan*, for 10 points each:

[10] The titular villain was played by this soft Corinthian leather enthusiast, a Mexican actor who played Mr. Roarke on *Fantasy Island* but might be better known to you no-good kids as Grandfather Valentin in the *Spy Kids* movies.

ANSWER: Ricardo Montalbán [or Ricardo Gonzalo Pedro Montalbán y Merino]

[10] Kirk gives a eulogy commending the humanity of the soul of this character, who dies repairing the *Enterprise*'s warp drive so the ship can escape the Genesis Device. This Vulcan was played by Leonard Nimoy.

ANSWER: Spock [accept that name with any of the following prefixes: “Mr.”, “Lieutenant Commander”, “Commander”, or “Captain”]

[10] At the beginning of the movie, Lt. Saavik is taking this supposedly-impossible-to-win test, named for the civilian ship located in the Klingon Neutral Zone that cadets are tasked with rescuing. Kirk famously cheated to win this test.

ANSWER: the Kobayashi Maru test

15. This character's madness forces Astolfo to journey to Ethiopia astride a hippogriff. For 10 points each:

[10] Name this character, a knight of Charlemagne who is presented “Furioso” in an epic poem written in Italian by Ludovico Ariosto.

ANSWER: Orlando [accept Roland]

[10] Ariosto's text is a continuation of the poem *Orlando Innamorato*, written by this Italian Renaissance poet.

ANSWER: Matteo Maria Boiardo

[10] Boiardo wrote verses discussing a game he called “Triumphs,” one of the earliest games of this type. In another poem, Madame Sosostri discusses a game of this type when she says “I do not find / The Hanged Man. Fear death by water.”

ANSWER: tarot cards [or tarocchi; or tarock; prompt on “(playing) card(s)”]

16. Charles II granted a charter to the Hudson's Bay company, which opened up London markets for this commodity. For 10 points each:

[10] Identify this commodity in which John Jacob Astor made himself a lot of money via his North West Company.

ANSWER: fur [accept fur trade]

[10] This Siberian family, who started in salt mining in Solvychegodsk before befriending Ivan the Terrible, also became a big name in the fur trading business.

ANSWER: Stroganov [or Stroganoff]

[10] A chunk of the fur trapped in Siberia made its way into this nearby country. Russia also negotiated the Treaties of Nerchinsk and Kyakhta with this country.

ANSWER: China [accept Qing empire]

17. Pioneering members of this movement included the author of *Son of Man* and *I, the Supreme*, while some critics trace its origins as far back as Ernesto Sabato's novel *The Tunnel*. For 10 points each:

[10] Name this literary movement of the 1960s whose influential figures include the aforementioned Augusto Roa Bastos and the author of *The Time of the Hero*.

ANSWER: the Latin American **Boom**

[10] *The Time of the Hero* was written by this Peruvian author, politician, and winner of the 2010 Lit Nobel, whose other popular works include *Aunt Julia and the Scriptwriter*.

ANSWER: Mario **Vargas Llosa** [or Jorge Mario Pedro **Vargas Llosa**, 1st Marquis of Vargas Llosa]

[10] The famous question "At what precise moment had Peru fucked itself up?" comes from this Vargas Llosa novel, in which Santiago and Ambrosio meet by chance in a dog pound and continue their discussion in the title bar.

ANSWER: **Conversation in the Cathedral** [or **Conversación en la Catedral**]

18. For 10 points each, name these French artists who painted Napoleon.

[10] This official painter of Napoleon painted an approximately 33-by-20 foot painting of *The Coronation of Napoleon*. He also painted *The Oath of the Horatii* and *The Death of Socrates*.

ANSWER: Jacques-Louis **David**

[10] This artist showed Napoleon in lavish red robes and holding Charlemagne's scepter in his *Napoleon I on His Imperial Throne*. He also painted *The Turkish Bath*, which was originally rectangular but was cut into a circular *tondo*.

ANSWER: Jean-Auguste-Dominique **Ingres**

[10] After meeting Napoleon's wife Josephine in Genoa, this painter depicted Napoleonic battles such as Eylau, Aboukir, and the Pyramids. He also painted portraits of Napoleon holding a tricolor on the Arcole Bridge, and visiting the plague house at Jaffa.

ANSWER: Antoine-Jean **Gros** [or Jean-Antoine **Gros**]

19. This city, the subject of a book-length "Homage" by Colm Toibin, was the center of the "Modernisme" architectural style of Lluís Domènech i Montaner and Antoni Gaudí. For 10 points each:

[10] Name this home of Camp Nou, the capital of Catalonia and the second-largest city in Spain.

ANSWER: **Barcelona**

[10] Barcelona's city council once provoked controversy by commissioning a nativity scene that did not include a *caganer* ("ka-ga-nay"), a traditional Catalan figurine of a peasant man performing this action.

ANSWER: **defecating** [accept word forms or synonyms--**pooping**, **shitting**, **taking a dump**, what have you]

[10] The *caganer* is of course not to be confused with the *Manneken Pis*, a bronze sculpture of a urinating boy found in this city located on and above the Zenne River. It is officially in neither Flanders nor Wallonia.

ANSWER: **Brussels**, Belgium [or **Bruxelles**; or **Brussel**; or the **Brussels**-Capital Region]

20. Silicon is ideal for fabricating sensors using this effect because its gauge factor, which determines the magnitude of this effect, is very high. For 10 points each:

[10] Name this phenomenon in which deformation changes the resistance of a structure.

ANSWER: **piezoresistivity** [or word forms, such as **piezoresistive**]

[10] The gauge factor is the ratio of the relative change in electrical resistance to this quantity, whose "engineering" form is defined as the change in length over the original length. It's the relative deformation and is paired with stress on namesake diagrams.

ANSWER: **strain**

[10] For most metals, and indeed most materials, the first part of a stress strain curve has this property, which allows one to determine the Young's modulus.

ANSWER: it is **linear** [or obvious equivalents, such as it is **straight**]

Extra. The 1977 Bread Riots were directed against this man's government. For 10 points each:

[10] Name this successor of Gamal Nasser, who shared a Nobel Peace Prize with Israel's Menachem Begin after successful negotiations at the Camp David Accords.

ANSWER: Anwar Sadat

[10] Sadat was the head of this country which fought the Yom Kippur War to regain the Sinai Peninsula from Israel.

ANSWER: Arab Republic of Egypt

[10] This United Nations Security Council Resolution was adopted in 1967 after the Six-Day War. It called for a rejection of "the acquisition of territory by war" and the need "for a just and lasting peace in the Middle East." This resolution is the foundation of Arab-Israeli peace agreements.

ANSWER: United Nations Security Council Resolution 242