

2016 MYSTERIUM: “I quiz all sounds, all thoughts, all everything”

Packet TB (Tiebreakers) – ornstein

Questions by Yale (Jacob Reed, Stephen Eltinge, Laurence Li, Adam Fine, Isaac Kirk-Davidoff) and Maryland (Jordan Brownstein, Weijia Cheng, Ophir Lifshitz, Naveed Chowdhury, Ani Perumalla), with Sriram Pendyala

Tossups

1. **The trimethylated derivative of this species is used to remethylate homocysteine in a reaction catalyzed by betaine-homocysteine S-methyltransferase. The C4, C5, and N7 atoms of the purine ring are derived from this compound. Along with glutamic acid and cysteine, this amino acid is found in the antioxidant glutathione. This compound is a byproduct of a reaction that transforms tetrahydrofolate into N5,N10-methylene-THF. In that reaction, a (*) hydroxymethyl group is removed from serine. Strychnine is an antagonist for the ligand-gated chloride channel that binds this compound. Along with proline, this amino acid is found in unstructured loops; it is also abundant in collagen with proline and hydroxyproline. This amino acid is the most common inhibitory neurotransmitter in the central nervous system. For 10 points, name this simplest proteinogenic amino acid, which is achiral.**

ANSWER: **glycine** [accept **Gly** or **G**]

<SP Biology>

2. **One character in this film has difficulty reciting a poem beginning “Better thorns in the woods than flowers in the manger. Better to have freedom and constant threat than slavery.” This film’s protagonist describes waiting a few hours with a North African man for a woman who liked “guys my age.” The protagonist of this film plays pinball before spinning around on “The Rotor.” This film includes a puppet show, during which the camera focuses on the reactions of the little kids watching it. Its protagonist is read a passage about a dying man that he has (*) copied by heart from *A Sinister Affair*. This film’s protagonist builds a shrine to Balzac and gets arrested for stealing a typewriter from his father. It ends with a freeze-frame of its protagonist, who has just escaped a youth observation center and run to the sea. For 10 points, name this film about the troubled Parisian youth Antoine Doinel, the debut of François Truffaut.**

ANSWER: *The **400 Blows*** [or *Les **Quatre Cent Coups***]

<JR Other Arts>

3. **This book claims that a certain person should eat “butter and honey” and later describes him growing up “as a tender plant, and as a root out of a dry ground: he hath no form nor comeliness.” This book includes God’s exhortation to “come now, and let us reason together.” It claims that “the ox knoweth his owner, and the ass his master’s crib,” but a “sinful nation” does not know their God. This book is surprisingly the first to definitively state “I am the (*) first and I am the last; besides me there is no God.” It claims that “all we like sheep have gone astray.” Its narrator is visited by an angel, who purges his mouth with a burning coal. It is the original source for the lines “for unto us a child is born” and “virgin shall conceive, and bear a son, and shall call his name Immanuel.” This book comes before Jeremiah as the first of the Latter or Major prophets. For 10 points, name this longest prophetic book of the Bible.**

ANSWER: Book of **Isaiah** [or Sefer **Yeshayahu**]

<JR Religion>

4. In a novel by this author, the funeral of Camusot's former mistress, Coralie, is funded by the sale of drinking songs published by Barbet and written by the protagonist, who is one of the "Two Poets" who title the first part of the novel. In that novel by this author, a cheap method for making paper is stolen by the Cointet brothers. This author created the printer David Séchard, who marries Ève, the sister of the aspiring poet Lucien Chardon. Another of his protagonists is drugged so that Victorine's brother, (*) Taillefer, can be killed in a duel arranged by his friend, who also lives in the Maison Vauquer with the sisters Delphine and Anastasie. In that novel by this author of *Lost Illusions*, the criminal "Tromp-le-mort" turns out to be Vautrin, who lives with Eugène de Rastignac and the title elderly relative. For 10 points, name this author of *Père Goriot*.

ANSWER: Honoré de Balzac

<JR European Literature>

5. Massive histories of this country were written by Jonathan Israel and John Lothrop Motley. Its culture was the subject of Simon Schama's *The Embarrassment of Riches*. This winner of the Battle of Texel allied with England in the Treaty of Nonsuch. This country owned "barrier fortresses" like Namur and Mons. Its navy conducted the Raid on the Medway and was aided by the "Sea (*) Beggars." This country was where the treaty ending the Nine Years' War was signed, and its neighbor was invaded in the War of Devolution. It won two wars with England under Michiel de Ruyter ("RAO-tuh"), but experienced a "disaster year" in 1672 during one of Louis XIV's many wars with it. For 10 points, name this country that experienced "tulip mania" and dominated 17th-century trade from its capital of Amsterdam.

ANSWER: The Netherlands [or the Dutch Republic; or Nederland; accept Holland; do **not** accept answers like "Spanish Netherlands"]

<JR European/Ancient History>

6. Some of the earliest works in this genre were written by Emilio de' Cavalieri and Giacomo Carissimi. One piece in this genre includes a lilting strings passage depicting the words "waft her, angels, thro' the skies." Another piece in this genre includes a "Dead March." In Italy, these works were often performed during Lent. One work in this genre includes a *Pifa* or "Pastoral Symphony." That work in this genre includes a long trumpet solo depicting a moment that begins "in the (*) twinkling of an eye, at the last trump." Handel's organ concertos were originally written to go with works in this genre. This genre became a craze after the success of John Gay's *Beggar's Opera* destroyed Italian opera in England. The most famous piece in this genre includes a section with lyrics like "King of Kings, and Lord of Lords" and "And he shall reign forever and ever," its "Hallelujah Chorus." For 10 points, name these opera-like large sacred choral pieces, exemplified by Handel's *Messiah*.

ANSWER: oratorios [accept operas until "Carissimi"; prompt on "choral works," "choruses," or similar answers]

<JR Auditory Arts>

7. This poem describes "Small circles glittering idly in the moon, until they melted all into one track of sparkling light." Its narrator laments "Far better never to have heard the name of zeal and just ambition" than to have taken up his main project, and describes himself as "a captive... coming from a house of bondage." Its narrator describes being frightened by a mountain suddenly looming over him after stealing a (*) boat. The eleventh section of this poem includes the lines "Bliss was it in that dawn to be alive, but to be young was very heaven!" This poem was, with its author's *The Excursion*, intended to be part of the ginormous *The Recluse*. It survives in two main versions from forty-five years apart. It begins "Oh there is blessing in this gentle breeze," and includes an account of the author's climb up Mount Snowdon. For 10 points, name this long autobiographical poem by William Wordsworth.

ANSWER: *The Prelude or, Growth of a Poet's Mind; An Autobiographical Poem*

<JR British Literature>

8. In this modern country, Jesse Oldendorf performed the most recent example of Crossing the T to destroy Shoji Nishimura's force, in the last major engagement between battleships. During that battle in this modern country, Thomas Kinkaid's forces didn't receive reinforcements because a telegram was misinterpreted as ending "the world wonders." Raymond Spruance's second-biggest victory was a battle east of this country nicknamed a (*) "turkey shoot" because around 600 enemy aircraft were shot down. This modern country was the site of the largest naval battle in history, which saw the first *kamikaze* attacks. After escaping this modern country, Douglas MacArthur said "I shall return," having avoided the Bataan death march. For 10 points, the United States once controlled what large, Southeast Asian island nation?

ANSWER: Republic of the Philippines [or Republika ng Pilipinas]

<JR American History>

9. When analyzing these events, one typically applies a 35 to 350 hertz bandpass filter to suppress shot noise and power grid harmonics. These events are analyzed using both a generic transient search and a binary coalescence search. They are detected using a 1064-nanometer Nd:YAG laser and 40-kilogram blocks of fused silica. A proposed site for measuring these events in India would join existing ones in (*) Hanford, Washington and Livingston, Louisiana. A recent one of these events exhibited a frequency sweep up to 250 hertz that was consistent with the inspiral-merger-ringdown sequence of its binary black hole source. That event resulted in the radiation of three solar masses of energy. For 10 points, name these relativistic warpings of spacetime, which were first recorded by LIGO in September 2015.

ANSWER: gravitational waves

<SE Physics>

10. This philosopher distinguished between "eloquence" and "poetry," providing an influential definition of the latter as "the delineation of states of feeling," in his early "Thoughts on Poetry and its Varieties." The German term for "human sciences," *Geisteswissenschaften*, was popularized by a translation of one of this man's books, which puts forward five methods of induction for psychology and economics. He claimed that "it is better to be a human being (*) dissatisfied than a pig satisfied" in distinguishing between "higher" and "lower" pleasures. This philosopher attacked the banning of pork in Muslim countries in an essay that quotes Alexis de Tocqueville's warning about a "tyranny of the majority." That essay by this philosopher was co-written by Harriet Taylor and argues that someone should only be prevented from doing something if it harms somebody else. For 10 points, name this English Utilitarian philosopher, who wrote *On Liberty*.

ANSWER: John Stuart Mill

<JR Social Science/Thought>

Bonuses

1. This critic's studies of narrative include *The Genesis of Secrecy*. For 10 points each:

[10] Name this critic whose works on canon formation include *Forms of Attention* and *The Classic*. He is best-known for studying how "men in the midst" see the end in *The Sense of an Ending*.

ANSWER: (Sir John) Frank **Kermode**

[10] This British novelist took the title of a 2011 novel from Kermode's *The Sense of an Ending*. His earlier novels include *A History of the World in 10½ Chapters* and *Flaubert's Parrot*.

ANSWER: Julian **Barnes**

[10] Barnes's *The Sense of an Ending* won this annual prize, awarded for the best fiction published in the UK. Previous winners include Margaret Atwood's *The Blind Assassin* and Salman Rushdie's *Midnight's Children*.

ANSWER: Man **Booker** Prize for Fiction

<JR British Literature>

2. Many of the theoretical underpinnings of these ideological tenets have been traced to the works of the sociologist Ziya Gökalp. For 10 points each:

[10] Name these ideological tenets that were promulgated by Mustafa Kemal Atatürk, like laicism, which justified secularizing reforms like the abolition of the caliphate and the replacement of sharia law with civil law.

ANSWER: **Six Arrows** [or **Altı ok**; prompt on "Kemalism"]

[10] The Six Arrows were the founding ideology of this country whose modern republic was established by Atatürk, and is the successor to the Ottoman Empire.

ANSWER: **Turkey**

[10] The Six Arrows feature prominently on the logo of this political party, which Atatürk helped found. Once the sole political party of Turkey, it now leads the opposition to the Justice and Development Party, or AKP.

ANSWER: **Republican People's** Party [or **CHP** or **Cumhuriyet Halk Partisi**]

<WC European/Ancient History>

3. Despite their simplicity, one-dimensional systems are often useful for illustrating general principles in quantum mechanics. Answer the following about solving them, for 10 points each.

[10] This physicist's namesake ansatz is used to find two-body reducible solutions to 1D many-body problems. He is more famous for his Nobel Prize-winning discovery of the proton-proton chain and the CNO cycle.

ANSWER: Hans **Bethe** ("BAY-tuh")

[10] Steven White invented a renormalization technique named for this object. The algorithm iteratively splits a 1D chain into left and right blocks and computes this construct for the left block by tracing out the right block.

ANSWER: **density matrix** [accept **density matrix renormalization group**; prompt on "DMRG"]

[10] The semiclassical eikonal ("icon-al") approximation reduces these sorts of problems to one dimension. This general phenomenon, in which free-moving particles interact, has types named for Tyndall, Compton, and Rayleigh.

ANSWER: **scattering**

<SE Physics>

4. According to Midrash Proverbs, this is the only holiday that will be celebrated after the coming of the Jewish Messiah. For 10 points each:

[10] Name this Jewish holiday celebrated on the fourteenth of Adar. On this holiday, the only book of the Old Testament not to mention God is recited, but is supposed to be partially drowned out by noisy *graggers*.

ANSWER: **Purim**

[10] On Purim and Hanukkah, one adds a paragraph beginning “*Al HaNissim*” to *this* set of prayers recited after any meal including bread. On Shabbat, these prayers begin with the words “Shir Hama’alot.”

ANSWER: **Birkat HaMazon** [accept **benching** or **bentshing**]

[10] Another tradition on Purim is *matanot l’evyonim*, which is a form of *this* practice. In Judaism, this practice is generally called *tzedakah*, a word that is, in fact, related to the Arabic *ṣadaqāh*. A description is fine.

ANSWER: giving to **charity** [or giving **alms**; accept equivalents involving “**donations**” or what have you]

<JR Religion>

5. This division of the autonomic nervous system is often contrasted with the “rest and digest” response. For 10 points each:

[10] Name this autonomic response to stress, which leads to the mobilization of energy reserves, an increase in heart rate, and the dilation of the pupils and bronchioles.

ANSWER: **sympathetic** response [accept **fight-or-flight** system]

[10] Whereas parasympathetic neurons are primarily cholinergic, sympathetic postganglionic neurons mostly release this neurotransmitter, which is the demethylated version of a compound produced by the adrenal medulla.

ANSWER: **norepinephrine** [do not accept “epinephrine”]

[10] This parasympathetic cranial nerve is responsible for the movement of the eyelids, eye, and dilation of pupils. This nerve coming into the ciliary ganglion forms synapses with ciliary neurons.

ANSWER: CN **III** [accept **oculomotor** nerve]

<SP Biology>

6. One of his collections includes articles on steak frites, Einstein’s brain, the Tour de France, strip-teases, and a picture of a young black man saluting. For 10 points each:

[10] Name this philosopher who distinguished between “readerly” and “writerly” texts, as well as “authors” and “scriptors.”

ANSWER: Roland (Gérard) **Barthes**

[10] Barthes’s debut book, *Writing Degree Zero*, is usually seen as a response to Jean-Paul Sartre’s application of *this* philosophy to literature. This philosophy was explored in Sartre’s *Being and Nothingness*.

ANSWER: **Existentialism**

[10] Barthes’s seminal “Introduction to the Study of Narratives” and “The Death of the Author” were among the essays included in *this* English-language compilation, which also includes essays on photographs and singers.

ANSWER: **Image – Music – Text**

<JR Social Science/Thought>

7. Answer some questions about the paintings of Petrus Christus, for 10 points each.

[10] Christus is credited with introducing *this* technique to Northern Europe. This technique uses geometry to accurately represent objects at different distances.

ANSWER: linear **perspective**

[10] Christus's extraordinarily realistic *Portrait of a Carthusian* includes a painted-on frame, complete with a fly, in a famous use of *this* technique.

ANSWER: **trompe-l'œil** ("tromp-loy")

[10] Christus's other most famous painting is a *Portrait of a Young Girl* wearing one of *these* headdresses. These ubiquitous cone-shaped headdresses were topped with a veil called a cointoise ("kwahn-TWAHZ").

ANSWER: **hennins**

<JR Visual Arts>

8. This hexameter poem is sometimes known as the "Epistle to the Pisos." For 10 points each:

[10] Name this long poem by Horace. It originated maxims like "ut pictura poesis," "in medias res," and "even Homer nods."

ANSWER: **Ars Poetica** [or *The Art of Poetry*]

[10] Horace also wrote a number of poems in *this* form, which was mastered by Pindar. Later on, this form was used for English works like a Keats poem "on a Grecian Urn."

ANSWER: **odes**

[10] This seventeenth-century French author was Horace's biggest fan, writing odes, satires, epistles, and an *Art poétique*. He was the main advocate of the "Ancients" in their Quarrel with the "Moderns."

ANSWER: Nicolas **Boileau** (-Despréaux)

<JR European Literature>

9. This city was briefly taken over by the Scaligeri family of neighboring Verona. For 10 points each:

[10] Name this city ruled in the fourteenth century by the Carrara family.

ANSWER: **Padua** [or **Padova**]

[10] Padua also completed with *this* family that ruled Milan from 1277 to 1447. They were succeeded by the Sforza.

ANSWER: **Visconti**

[10] Paduan forces under John Hawkwood won the Battle of Castagnaro, a classic battle fought by *these* people. These mercenaries led the armies of Italian city-states throughout the Middle Ages and Renaissance.

ANSWER: **condottieri** [or **condottiero**; or **condottiere**; accept **capitani di ventura**]

<JR European/Ancient History>

10. This architect drew inspiration from Jørn Utzon's ("yern OOT-sun's") Kingo Houses for his Mountain Dwellings. For 10 points each:

[10] Name this contemporary Danish architect, best-known for large housing developments like VM Houses and 8 House. Early on, he designed a set of swimming pools in the harbour of Copenhagen.

ANSWER: Bjarke (Bundgaard) **Ingels**

[10] Ingels's fellow Dane Utzon is best-known for designing the white "sail-like" opera house in *this* Australian city.

ANSWER: **Sydney**

[10] Ingels's housing projects have drawn extensively on the work of Le Corbusier, who imagined a city described by *this* adjective. This adjective also names Le Corbusier's most famous *Unité d'Habitation*, in Marseille.

ANSWER: **radiant** [or **radieuse**]

<JR Other Arts>

11. In this play, Mrs. Mortar teaches a student the “Quality of Mercy” speech from *The Merchant of Venice*. For 10 points each:

[10] Name this 1934 play that centers on the suspected lesbian relationship between the schoolteachers Karen and Martha.

ANSWER: *The **Children’s Hour***

[10] *The Children’s Hour* is by this playwright of *The Little Foxes* and *Another Part of the Forest*.

ANSWER: Lillian **Hellman**

[10] This disobedient child first accuses Karen and Martha of homosexuality. In the first scene, she tries to win over the teacher Lily Mortar with a wilted bouquet of flowers which she claims to have picked.

ANSWER: **Mary Tilford** [accept either name]

<LL American Literature>