

2025 ACF Regionals

Packet H by Cambridge C, Illinois B, Purdue, Sheffield B, Southampton A, Toronto D

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Tossups

1. A character from this book is shown in front of a nude figure pointing left and straddling a figure emerging from the sea in two entries of a series commissioned by Thomas Butts. A large triptych from the 1850s inspired by this book includes *The Plains of Heaven* and was the last major work by John Martin. The title figure holds a lightning bolt amid raised swords in the last of three versions of a painting based on this book by Benjamin West. This book inspired William Blake's painting *The Great Red Dragon and the Woman Clothed with the Sun*. A painting inspired by this book depicts an elongated man in blue raising his hands to the cloudy sky; that El Greco painting is *The Opening of the Fifth Seal*. For 10 points, what biblical book inspired Albrecht Dürer's *The Four Horsemen of the Apocalypse*?

ANSWER: Book of **Revelation** [prompt on Bible or New Testament; reject "Revelations" or "Book of Revelations"] (Benjamin West's painting is *Death on a Pale Horse*.)

<Toronto D, Painting and Sculpture>

2. David Lewin showed that the T/I ("T-eye") group is dual to a dihedral group acting on these objects whose three generators form orbits of size 2, 6, 8, and 24. Secondary operations like the Slide and *Nebendverwandt* act on these objects and can be written as products of P, R, and L. Leonhard Euler visualized transformations on these objects with a hexagonal lattice diagram known as the *Tonnetz* that is studied in Neo-Riemannian theory. A functional analysis of these objects developed during the common practice period. These objects' "quality" may be indicated with superscript symbols like a triangle or slashed circle. Inversion changes the voicings of these objects, whose "progressions" are studied in harmony. For 10 points, name these sets of three or more simultaneous notes that come in "major" and "minor" forms.

ANSWER: **chords** [accept **triads** or **sevenths** or **seventh** chords; prompt on harmony until read]

<JC, Classical Music>

3. Mutations in BLM proteins involved in fixing the start of this process can lead to Bloom's syndrome. During this process, one type of structure is produced in either "short" or "long" pathways depending on FEN1 ("fen-one") activity. CDC7 and Dbf4 begin this process by phosphorylating the MCM complex. John Cairns experimented on theta structures that form during this process, which uses an enzyme that can be cleaved to form the Klenow fragment. The trimeric PCNA sliding clamp increases the processivity of an enzyme involved in this process. In this semiconservative process, Okazaki fragments on the lagging strand are fixed by ligase. This process occurs in the S phase of the cell cycle. For 10 points, name this first process of the central dogma, in which the genetic material of a cell is copied.

ANSWER: DNA **replication** [accept **DNA synthesis**]

<Toronto D, Biology>

4. An author with this surname drew on the Boko Haram schoolgirl kidnappings in her 2019 final novel *Girl*, wrote about Cait and Baba in a trilogy beginning with *The Country Girls*, and had the first name Edna. In a novel by an author with this assumed surname, fourteen one-legged men attempt to prevent the hanging of a nameless man. A press specializing in experimental fiction is named after a novel by an author with this surname that features Saint Augustine and James Joyce. A man created by that author with this surname kills Mathers with a spade and uses a cash box containing omnium to write commentaries on the philosopher De Selby. For 10 points, the Irish modernist author of *The Dalkey Archive* and *The Third Policeman* shares what surname with a member of the Thought Police from 1984?

ANSWER: **O'Brien** [accept Edna **O'Brien** or Flann **O'Brien**; accept Brian **O'Nolan** or Myles na **gCopaleen** or Myles na **Gopaleen**]

<Southampton A, British Literature>

5. The Wati language has *l* (“ell”), null, *n*, and *ng* (“ing”) classes for this process, among the most in the Pama–Nyungan family. Per the title of a Franz Bopp paper, this process’s rules in Sanskrit contrast with those in Greek, Latin, Persian, and Germanic languages. Modern Hebrew eliminated the “vav-consecutive” construction for this process. In Japanese, words called “ichidan” remove or replace the final *kana* via this process, unlike “godan” words. In the French preterite form, this process replaces the final “er” (“E-R”) and replaces it with “ai” (“A-I”) for the first- or third-person. In contrast to declension for nouns or adjectives, this process is the inflection of verbs. For 10 points, name this process in which verbs are modified to match categories like grammatical person, as in the difference between “I buzz” and “he buzzes.”

ANSWER: grammatical **conjugation** [or verb **conjugation**; prompt on **inflection** until read; prompt on **prefixing** or **suffixing** by asking “for what grammatical purpose?”]

<NS, Social Science>

6. This city is unusually referenced as the “wide land” in the so-called Agum-kakrime (“AG-um-KAK-rim-eh”) Inscription, which is only known from later copies. An “oracle question” about an attack on this city mentions the threat of troops from Idamaraz in the Kingdom of Khana. This city’s kingship passed to “E’urukuga” in a text indicating the founding of the First Sealand Dynasty. Kashtiliash IV’s (“CASH-til-ee-osh the fourth’s”) loss of this city is recounted in the Epic of Tukulti-Ninurta I. This city’s 1595 BCE sack by Mursili I’s forces gave way to its Late Bronze Age Kassite domination, which ended after Shutruk-Nakhunte (“SHOOT-rook NAH-khoon-teh”) conquered it and plundered a law code from this city’s “Old” period. The Esagila temple housed this city’s statue of Marduk. For 10 points, name this Mesopotamian city that was ruled during its Amorite period by Hammurabi.

ANSWER: **Babylon** [or **Babilim** or **Kan diġirak** or **Babbar** or **Babbir** or **Pambalu** or **Babalu** or **Karduniash**; accept King of the Wide Land of **Babylon**; accept Old **Babylonian** period]

<AT, Other History>

7. One of these things specified by the AVX-512 extension is a bit-permuting Galois field affine transformation called GF2P8AFFINEQB (“G-F-two-P-eight-affine-Q-B”). Modern x86 processors use AES-NI to implement encryption operations as these things. Whether there are single or multiple streams for these things and data name classes of parallel architecture paradigms. A five-stage system for interpreting these things begins with “fetch” and “decode” and may have “nop” (“no-op”) inserted when hazards occur. The x86 register “rip” (“R-I-P”) corresponds to the program counter and specifies the address of one of these things, which may have its bytesize specified with the suffix W, L, or Q, such as in *movq* (“move-Q”). Each line of an assembly file contains one of these things. For 10 points, name these things that are executed when a program runs.

ANSWER: CPU **instructions** [accept x86 **instructions**; accept **instruction** set architectures] (The five-stage system is the RISC pipeline.)

<Southampton A, Other Science>

8. This leader received the “Letter of three hundred” from scientists decrying a decline in biology research. This leader had Machine-Tractor Stations rapidly closed and forced farmers to buy the leftover equipment. A visit to the Iowa farm of Roswell Garst inspired this leader to grow new hybridized corn breeds in his country, which largely failed due to climate differences with the US. This leader recruited Komsomol volunteers to move to new farms in the Virgin Lands program. At the 20th Congress, this leader gave a speech titled “On the Cult of Personality and Its Consequences” that denounced his predecessor and signaled the beginning of a relaxation of censorship called this leader’s “Thaw.” For 10 points, what Soviet leader gave the “Secret Speech” and succeeded Joseph Stalin?

ANSWER: Nikita **Khrushchev** [or Nikita Sergeevich **Khrushchev**]

<Southampton A, European History>

9. A Biblical passage claims that the word for this status should be cried twice by a man who “shall dwell alone” and should “put a covering upon his upper lip.” Jose ben Joezer (“yo-SAY ben yo-EZZ-air”) decreed that this status existed on all land outside of the Land of Israel. Eight things that confer this status are listed in the *sheratzim* (“shra-TSEEM”), or “creeping things.” A method of removing this trait called *netilat yadayim* (“neh-tee-LOT ya-DAH-yeem”) is more moderate compared to *tevilah* (“tvee-LAH”). The Kohen who performs the red heifer (“HEFF-er”) sacrifice gains this status until evening. The “father” of this status is the only grade of this status greater than coming into contact with a corpse. *Zav* and *niddah* (“nee-DAH”) are sources of this trait, which can be erased through immersion in a *mikveh*. For 10 points, name this trait of self-pollution removed through ritual washing.

ANSWER: **impurity** [or word forms; or ritual **impurity**; or *tum’ah*; accept **unclean**liness or word forms; accept **contamination**; accept self-**pollution** until read; accept *Av HaTumah* or “Father of **Unclean**liness”] (The Biblical passage is Leviticus 13:45–46.)

<AK, Religion>

10. While honeymooning, a man in this novel claims he’ll die of embarrassment if his wife requests that Oscar Wilde autograph her glove. In Edith Grossman’s translation, a man in this novel is described as savoring the smell of his “urine that had been purified by lukewarm asparagus” at a Silver Jubilee meal. A couple in this novel almost divorce after having a prolonged argument about whether there was soap in their bathroom. An opera-lover who inspects the corpse of his former chess partner is reminded of one of this novel’s title concepts after detecting the smell of bitter almonds in its opening sentence. An elderly man in this novel dies while climbing a ladder to retrieve his multilingual parrot. For 10 points, Dr. Juvenal Urbino treats the title disease in what novel by Gabriel García Márquez?

ANSWER: ***Love in the Time of Cholera*** [or *El amor en los tiempos del cólera*]

<TH, World Literature>

11. Hunting and chess are compared to ruling properly in the asides of a history of this empire called the “Comfort of the Chest.” The rise of this empire is connected to the historiographical concept of the “Sunni Revival” that followed the “Shia Century.” The *Book of Government*, or *Siyasatnama*, was written by a statesman of this empire. The *atabeg* Nizam al-Mulk served this empire, which patronized Omar Khayyam. Shia opposition to this empire led to the foundation of the Order of Assassins. The first *beyliks* and the Sultanate of Rum emerged in territory newly conquered by this empire after its ruler captured the Emperor Romanos IV in battle. For 10 points, Alp Arslan ruled what Turkish empire that expanded into Anatolia after it defeated the Byzantines at Manzikert?

ANSWER: **Seljuks** [or Great **Seljuk** Empire; accept **Seljuk** Turks or **Seljukids** or **Seljuk** Turkomans or **Seljuk** Turkomans or **Saljuquids**] (The first line is Muhammad ibn Ali Rawandi’s *Rahat al-Sudur*.)

<EC, World History>

12. This thinker divided the sciences into “Science of Discovery,” “Science of Review,” and “Practical Science.” A law named for this thinker states that P must be true if there is a proposition Q such that “P then Q” implies P. This thinker developed theories regarding the importance of continuity and “absolute chance,” respectively called synechism and tychism. This thinker listed “quality,” “relation,” and “representation” as “firstness,” “secondness,” and “thirdness” in “On a New List of Categories.” Every sign is either an icon, index, or symbol in this thinker’s theory of semiotics. This thinker included the method of tenacity among the methods of “settling opinion” in “The Fixation of Belief.” For 10 points, name this “father of pragmatism” who wrote “How to Make Our Ideas Clear.”

ANSWER: Charles Sanders **Peirce** (“purse”) [or C. S. **Peirce**]

<Purdue, Philosophy>

13. A set of states for this system forms a prototypical overcomplete basis for which one can apply E. C. G. Sudarshan’s P representation. The Hardy–Hille formula generalizes the propagator of this system, called the Mehler kernel. Each index in a Fock space is given by one of these systems, since a real scalar field is represented by infinitely many of these systems coupled together. Roy J. Glauber introduced this system’s canonical coherent states. An independent collection of these systems are modelled in an Einstein solid. Operators denoted a and a -dagger are used to solve for this system’s energy levels and are denoted “creation” and “annihilation,” respectively. This system’s energy levels are quantized in units of h -bar omega. For 10 points, name this non-classical analogue of a mass on a spring.

ANSWER: **quantum harmonic oscillator** [or **OHO**; prompt on harmonic oscillator]

<Sheffield B, Physics>

14. A villain on this show was killed off because his actor, Andrew J. Ferchland, hit puberty. David Graeber’s article *Rebel Without a God* is an early work in the “studies” of this show. An episode of this show in which the bald “Gentlemen” terrorize its town was nominated for an Emmy for Outstanding Writing despite featuring very little dialogue. During an implied sex scene, a character on this show levitates while singing during the musical episode “Once More, With Feeling.” On a spinoff of this show, David Boreanaz played a cursed character working as a detective in LA. This show’s title character leads the Scooby Gang and has romantic relationships with the normally-hostile characters Spike and Angel. For 10 points, Joss Whedon created what show starring Sarah Michelle Gellar as a demon killer?

ANSWER: **Buffy the Vampire Slayer** [accept **Buffy** studies or **Buffyology**] (The nearly-dialogueless episode is “Hush.”)

<Southampton A, Pop Culture>

15. Attorney Francis Fisher Kane called these events “generally unwise and very apt to result in injustice” in his resignation letter. The Georgist politician Louis F. Post spoke out against these events before the House Committee on Rules. The *Buford*, nicknamed the “Soviet Ark,” was used to transport nearly 300 people involved in these events to Hanko, Finland. These events, led by a man nicknamed the “Fighting Quaker,” began after mail bombings launched by supporters of Luigi Galleani. Future FBI director J. Edgar Hoover was appointed to orchestrate these events, which were prompted by the Boston police strike and targeted figures such as Emma Goldman for deportation. For 10 points, name these events carried out by a namesake Attorney General during the first Red Scare.

ANSWER: **Palmer Raids** [or **raids** by A. Mitchell **Palmer**; prompt on Red Scare or First Red Scare until read; prompt on bombings; prompt on raids]

<Purdue, American History>

16. In this musical's original stage production and film version, a number set in a sewer was choreographed by Michael Kidd. Neon signs reading "Mindy's" and "Hot Box" were fixtures of an "immersive" 2023 staging of this musical by Nicholas Hytner at London's Bridge Theatre. In this musical, a character reads a book that claims single women "can develop 'la grippe,' 'la post nasal drip'" in her namesake "Lament." A number in this musical accuses a concept of having a "very unlady-like way of running out." This musical alludes to its source author via its overture, "Runyonland." New York and Havana are the settings of this musical, whose numbers include "A Bushel and a Peck" and "Luck Be a Lady." For 10 points, Sky Masterson and Nathan Detroit appear in what Frank Loesser ("LESS-er") musical titled for two gendered groups?

ANSWER: ***Guys and Dolls***

<Cambridge C, Other Fine Arts>

17. In an emotional speech, this character laments, "No mother did that for you. No nurse. No slave. I." while cradling a funeral urn. This woman's cries of "OIMOI MOI" are left untranslated in Anne Carson's version of a play in which this woman often argues with her sister Chrysothemis. This woman asks a chorus of slave-women if it is right to ask the gods for "one who will take life for life" before pouring wine onto a grave. Euripides parodied a scene in which a lock of hair and a footprint lead this character to recognize a man who has secretly returned to Argos. This woman assists her brother in a plot to kill the king Aegisthus and his wife. For 10 points, name this woman who helps Orestes take revenge on their mother Clytemnestra in *The Libation Bearers* from Aeschylus's *Oresteia*.

ANSWER: ***Electra*** (The first two sentences refer to Sophocles's *Electra*.)

<JK, European Literature>

18. So-called "designer solvents" named for this term are functionalized to make them task-specific. In the Debye-Hückel limiting law, the natural logarithm of the mean activity coefficient is proportional to the square root of a quantity named for this term. The quantity "square root of 12 over 12 minus coordination number, all minus one" defines the critical value of the ratio in compounds described by this term written as "r-sub-C over r-sub-A." This term names room-temperature liquids such as BMIM-PF6 and EMIM. Compounds described by this term are described by Pauling's five rules. The Born-Haber cycle calculates the lattice energy of compounds described by this term. For 10 points, name this term that describes bonds between two oppositely charged species such as sodium and chloride.

ANSWER: ***ionic*** [accept ***ionic*** liquids or ***ionic*** strength or ***ionic*** radius or ***ionic*** bonds]

<Purdue, Chemistry>

19. This poet's spouse created a bust of Sappho for their farmhouse in upstate New York, which Mary Oliver recalled visiting in the essay "Steepletop." A poem by this author observes that "the rain / is full of ghosts tonight" and notes, "summer sang in me / A little while." This poet commanded the reader to "let geese gabble and hiss" in a poem that considers those who "have heard her massive sandal set on stone." That sonnet by this author imagines the "terrible day, when first the shaft into his vision shone / of light anatomized!" This poet stated "Infinity / Came down and settled over me" in a poem beginning "All I could see from where I stood / Was three long mountains and a wood." For 10 points, name this poet of "Euclid alone has looked on Beauty bare" and "Renascence."

ANSWER: Edna St. Vincent ***Millay***

<Illinois B, American Literature>

20. In one text, this deity gives compliments such as “how beautiful are thy buttocks, how flourishing,” to another deity as part of a seduction plot. This god, whose 72 allies included Queen Aso, is depicted receiving offerings of wine on the Year 400 Stela. To reach a compromise with this god, a goddess often conflated with Athena offers him the foreign goddesses Anat and Astarte as wives. This god cut the talons off his servant Nemty after he ferried a goddess to a meeting on an island. This god loses a race after his opponent tricks him into making his boat out of stone. After cutting his brother into 14 pieces, this god fights to rule Egypt in a series of “contendings” with his nephew Horus. For 10 points, what brother of Osiris is the Egyptian god of storms and chaos?

ANSWER: **Seth** [or **Sutekh**]

<Purdue, Mythology>

Bonuses

1. Plays in this form produced conflict via the “quiproquo,” in which two characters would misinterpret the same situation in opposing ways. For 10 points each:

[10h] Name this formulaic 19th-century dramatic genre developed by Eugène Scribe (“oo-zhen skreeb”) and popularized by Victorien Sardou.

ANSWER: **well-made** play [or *pièce bien faite*]

[10e] George Bernard Shaw criticized the well-made play in an essay titled for the “quintessence” of this author, which laments that his play *A Doll’s House* may be acted as a “melodrama or farcical comedy.”

ANSWER: Henrik **Ibsen** [or Henrik Johan **Ibsen**; accept “The Quintessence of **Ibsenism**”]

[10m] An author with this surname adapted his didactic novel *The Lady of the Camellias* as a well-made play. Another author with this surname drew on his African ancestry in the novel *Georges*.

ANSWER: **Dumas** [accept Alexandre **Dumas fils** or Alexandre **Dumas père**]

<Purdue, European Literature>

2. Enhanced color images from the Ralph MVIC instrument show a large red area thought to be an impact crater on this object. For 10 points each:

[10h] Name this object that James Christy discovered from observing a time-varying bulge at the Naval Observatory Flagstaff Station. This astronomical object contains the Kubrick Mons.

ANSWER: **Charon** [or **(134340) Pluto I**; reject “Pluto”]

[10m] Charon and the other moons of Pluto were first imaged by this probe that contains the Ralph instrument. This probe launched in 2006 is expected to exit the Kuiper Belt in 2029.

ANSWER: ***New Horizons***

[10e] The LEISA instrument aboard *New Horizons* determined that Pluto’s value of this quantity was due to surface ice. Enceladus has the highest value of this quantity in the solar system since its surface reflects nearly all light.

ANSWER: **albedo**

<Purdue, Other Science>

3. In a myth of the Chukchi people, a spirit in the form of this animal created the Kamchatka Peninsula by dropping one of its feathers. For 10 points each:

[10e] Name this type of bird said to portend the downfall of England if removed from the Tower of London. Huginn and Muninn are two of these birds that give information to Odin.

ANSWER: **ravens** [or **crows** or **corvids**]

[10m] Before one of these events, a goddess appeared to Donn Cuailnge (“COOL-nyuh”) in the form of a raven.

Before one of these events, a pregnant woman who is forced to run a race against horses curses nearby men to suffer labor pains during their time of greatest need.

ANSWER: **cattle raids** [accept **Cattle Raid** of Cooley or **Táin Bó Cúailnge**; accept answers of **stealing** or **theft** of **cows** or **cattle**; prompt on **raids** or **theft** or **stealing** by asking “of what?”; prompt on **invasions** by asking “for what purpose?”]

[10h] In the *Mabinogion*, a group of ravens and soldiers take turns attacking each other while Owain and King Arthur play this game. In another myth, Midir wins an embrace and a kiss from Étaín after repeatedly losing to Eochaid (“ECK-id”) in this chess-like game.

ANSWER: **fidchell** (“FID-kell”) [or **fidhcheall** or **fidceall** or **fithchill** or **gwyddbwyll**]

<Southampton A, Mythology>

4. During a period called the *isohiva* or “Great Wrath,” thousands of people from this modern-day country were enslaved, then sold in Constantinople or forced to drain marshes around an island whose name means “Hare Island.” For 10 points each:

[10h] Name this modern-day country where peasants rebelled over the costs of quartering armies in the Cudgel War. The *Abc-kiria* and *Se Wsi Testamenti* were published by a priest from this modern-day country.

ANSWER: **Finland** [or **Suomi**; or Republic of **Finland**; or **Suomen** tasavalta; accept Republiken **Finland**] (“Hare Island” is Zayachy Island. The priest is Mikael Agricola.)

[10e] The Protestant Reformation began in Finland under the rule of Gustav, the founder of Helsinki and first ruler of this Swedish dynasty. Gustavus Adolphus was a king of this dynasty.

ANSWER: **Vasa** [or **Wasa**; or House of **Vasa**; or **Vasaätten**; or **Wazowie**; or **Vazos**]

[10m] Finnish became an official language of administration during an “Age of” this concept in Sweden. That era named for this concept saw increased parliamentary power after the Great Northern War.

ANSWER: Age of **Liberty** [accept **frihetstiden** or **frihet**; accept **vapauden** aika or **vapautta**]

<EC, European History>

5. Nomenclature of these compounds usually involves the terms “syn” and “anti” that are preserved by rotation around a single bond. For 10 points each:

[10m] Name these organic compounds that have multiple chiral centers, but unlike meso compounds, are not superimposable on their mirror images.

ANSWER: **diastereomers** [or **diastereoisomers**; prompt on **stereoisomers**; reject “enantiomers”]

[10e] The diastereomer nomenclature terms “threo” and “erythro” come from examples of these compounds called threose and erythrose. Dextrose is an alternate name for right-handed glucose, which is one of these biomolecules.

ANSWER: **sugars** [or **saccharides**]

[10h] Diastereoselective reactions are governed by this phenomenon, observed in chiral ketones by Donald Cram. Nguyễn Trọng Anh incorporated the Burgi–Dunitz angle to Hugh Felkin’s model of this phenomenon.

ANSWER: asymmetric **induction**

<MY, Chemistry>

6. This politician cited the writings of Anton Wilhelm Amo, who was from the same ethnic group, to argue that idealism is “enmeshed in contradictions” and suffers from a “God-complex.” For 10 points each:

[10h] Name this politician and thinker who developed, and sometimes names, a scientific socialist philosophy called Consciencism (“conscience-ism”).

ANSWER: Kwame **Nkrumah** (“en-KROO-mah”) [or Francis Kwame **Nkrumah**; accept **Nkrumaism**]

[10m] Nkrumah described Consciencism as a “Philosophy and Ideology for” this process, whose “conceptual” form was coined by Kwasi Wiredu. An essay titled for this process advocates the Kikuyu language and calls English a “cultural bomb.”

ANSWER: **decolonization** [or word forms like **decolonizing**; accept **Decolonising the Mind** (by Ngũgĩ wa Thiong’o)]

[10e] Nkrumah described Consciencism as drawing on African roots of targeting this broad status, which he contrasted with oligarchy. Advocates of this status debate whether it should be “of outcome” or “of opportunity.”

ANSWER: **equality** [accept **egalitarianism**]

<TM, Philosophy>

7. In a 1983 story set in this city, a muezzin's call to prayer interrupts a woman's intercourse with her husband, who then suddenly dies of a heart attack. For 10 points each:

[10e] Name this city where Alifa Rifaat set the story "Distant View of a Minaret." Jackie Kennedy edited the English translation of *Palace Walk*, a novel in a 1950s trilogy set in this capital city by Naguib Mahfouz.

ANSWER: **Cairo**

[10m] Rifaat's story "My World of the Unknown" depicts a woman's affair with a female one of these characters. In another story, one of these characters goes to a pool with talking fish after learning that Solomon has been dead for centuries.

ANSWER: **djinn** [or **genies**; or **jinni**] (The story is the second story in *One Thousand and One Nights*.)

[10h] This Egyptian physician-turned-author wrote the anti-FGM tract *Women and Sex* and fictionalized her own imprisonment in the 1975 novel *Woman at Point Zero*.

ANSWER: Nawal El **Saadawi**

<AP, World Literature>

8. This piece was commissioned alongside works like Michael Tippett's *King Priam* after the destruction of Coventry Cathedral in a bombing raid. For 10 points each:

[10m] Name this work whose premiere at the reconstructed cathedral launched a tradition of using a second conductor to manage the chamber orchestra. The text of this piece interweaves nine poems by Wilfred Owen.

ANSWER: **War Requiem**, Op. 66

[10e] This English composer of the *War Requiem* also collected a set of *Four Sea Interludes* from his opera *Peter Grimes*.

ANSWER: Benjamin **Britten** [or Edward Benjamin **Britten**]

[10h] In the *War Requiem*, this kind of ensemble performs from offstage accompanied by a portable organ. Britten's *Missa brevis* is scored for this ensemble and organ.

ANSWER: **boys' choir** [accept **children's choir** or **treble choir**; accept **chorus** in place of "choir"; prompt on **choir** or **chorus**; reject "male choir" or "male chorus"]

<MY, Classical Music>

9. During a 2024 election, this party leader launched his manifesto at an amusement park and was interviewed on a spinning teacup ride. For 10 points each:

[10h] Name this party leader whose campaign stunts included using a waterslide and bungee jumping. Those stunts may have helped this leader's party win 72 seats in July, the best result for a third party in his country since 1923.

ANSWER: Ed **Davey** [or Sir Edward Jonathan **Davey**]

[10m] Ed Davey is currently the leader of this political party and contributed to the Orange Book, an essay collection that also featured a chapter from this party's earlier leader Nick Clegg.

ANSWER: **Liberal Democrats** UK [or **Lib Dems**]

[10e] The Lib Dems' 72 seats still were dwarfed by the majority won by this British Labour leader, who became Prime Minister after the election despite his party only winning a third of the popular vote.

ANSWER: Keir **Starmer**

<Sheffield B, Current Events>

10. Before this event, Governor John Jenkins appointed Valentine Bird to oversee export tax collection, much to the dismay of Thomas Miller, who complained so much he was imprisoned for treason. For 10 points each:

[10h] Name this 1677 rebellion in the Albemarle region, in which settlers overthrew the colonial government in protest of the enforcement of the Navigation Acts.

ANSWER: **Culpeper's** Rebellion

[10e] John Culpeper opposed the Lords Proprietor in what would later become this state, where Virginia Dare was born in Roanoke.

ANSWER: **North Carolina** [or **NC**]

[10m] Religious strife during the rebellion was partly sparked by this religious leader's visit to the Albemarle Settlements. This author of "Something Further Concerning Silent Meetings" founded Quakerism.

ANSWER: George **Fox**

<Illinois B, American History>

11. An Elizabethan-era tradition of dramatic performances at these places produced the first English tragedy, the Seneca-imitating play *Gorboduc*. For 10 points each:

[10m] Name these venues where comedies like *Gammer Gurton's Needle* were staged before James Burbage built the first English playhouse. Robert Greene and Thomas Lodge belonged to a group of playwrights known as these places' "wits."

ANSWER: **universities** [or **colleges**; accept **University** Wits; prompt on **schools** or **educational** institutions]

[10e] This University Wit found greater success on the professional London stage with his so-called "mighty line" of blank verse, which this author employed in plays like *Tamburlaine* and *Doctor Faustus*.

ANSWER: Christopher **Marlowe** [or Kit **Marlowe**]

[10h] The most enduring University comedy was this circa 1553 play by Nicholas Udall, in which Dame Christian Custance is pestered by the boastful title character while betrothed to the straightlaced Gavin Goodluck.

ANSWER: **Ralph Roister Doister**

<TH, British Literature>

12. The Korean Confucian scholar Ajiki was deified after his death and worshipped in a Shinto shrine at Toyosato-cho, having spearheaded the breeding of horses in Japan during this period. For 10 points each:

[10m] Name this period in which many Imaki no Tehito, or "Recently Arrived Skilled Artisans," began bringing technologies to Japan. This earlier part of the Yamato period is named for a type of megalithic tomb.

ANSWER: **Kofun** period [or **Kofun** jidai; prompt on **Yamato** until read]

[10e] After Goguryeo ("go-GOOR-yuh") sacked a site in 400 AD, Yamato elites relied on the Toraijin ("toh-RYE-jin"), immigrants to Yamato Japan, for this metal used in weapons and horse gear. This metal also names the period that follows the Bronze Age.

ANSWER: **iron** [or **tetsu** or **tiě**; accept **Iron** Age; reject "steel"]

[10h] Ichimura Kunio noted how innovations of the Toraijin facilitated the embassy of the "Five Kings of" this place to China in the 5th century. The *Shānhǎi jīng* provides one of the earliest uses of this early ethnonym for Japan.

ANSWER: **Wa** [or **wō**; accept Five Kings of **Wa**]

<AT, Other History>

13. Théodore Géricault's *Man Clutching a Horse in Water* was modeled on a painting in this series that depicts a deluge, which William Hazlitt hailed as "perhaps the finest historical landscape in the world." For 10 points each: [10h] Name this 17th-century series of paintings based on Old Testament stories. Two spies carry giant grapes in one painting in this series, while another shows Ruth kneeling before Boaz.

ANSWER: The **Four Seasons** [or Les **Quatre Saisons**]

[10m] *The Four Seasons* is a series by this Baroque artist. He may have allegorically depicted the seasons as four figures holding hands in a circle in a painting in which a winged old man on the right plays the lyre.

ANSWER: Nicolas **Poussin** (The painting is *A Dance to the Music of Time*.)

[10e] In another Poussin painting, the four seasons comprise this god's retinue as he is beseeched by his son. The Colossus of Rhodes was a statue of this sun god who was often identified with Apollo.

ANSWER: **Helios** [or **Helius**]

<Illinois B, Painting and Sculpture>

14. In its opening, the author of this epistle mentions Timothy as "our brother" and refers to himself as "a prisoner of Jesus Christ." For 10 points each:

[10h] Name this short "prison epistle," which instructs the title person to forgive a slave, for he is "no longer a slave but more than a slave, a beloved brother."

ANSWER: Epistle to **Philemon**

[10e] During his first Roman imprisonment, this man wrote the "prison epistles," part of thirteen epistles attributed to him in the New Testament.

ANSWER: **Paul** the Apostle [or Saint **Paul**; or **Saul of Tarsus**; accept **Pauline** epistles or epistles of **Paul**]

[10m] A "prison epistle" dedicated to this city describes wearing shoes prepared with the "gospel of peace" in an extended analogy about the "Armor of God." In a Christian legend, seven men from this city escape the Decian persecution by sleeping in a cave.

ANSWER: **Ephesus** [accept Epistle to the **Ephesians**; accept the Seven Sleepers of **Ephesus**]

<AK, Religion>

15. A consequence of this principle used in antenna engineering states that the product of input impedances of metal and slot pieces equals the square of intrinsic impedance over four. For 10 points each:

[10h] Name this principle that states the pattern formed from an opaque body can be reformulated as a hole of the same size and shape, but with a different beam intensity.

ANSWER: **Babinet's** ("bab-in-AY's") principle

[10e] Babinet's principle concerns the patterns formed by this phenomenon in which light bends around an obstacle.

ANSWER: **diffraction** [accept **diffraction** patterns]

[10m] Babinet's principle is formulated for scalar fields using this physicist's diffraction formula, from which the Huygens-Fresnel ("HIGH-guns fren-EL") principle is derived. This physicist described the spectra of gases in his three laws of spectroscopy.

ANSWER: Gustav **Kirchhoff** [or Gustav Robert **Kirchhoff**; accept **Kirchhoff's** diffraction formula or **Kirchhoff's** laws of spectroscopy]

<Purdue, Physics>

16. An anti-American riot in this modern-day country in 1865 began after Jack Oliver attempted to take a slice of watermelon without paying for it. For 10 points each:

[10e] Name this country where the Hay–Bunau-Varilla Treaty granted the US the rights to a “canal zone” in 1903.

ANSWER: **Panama** [or Republic of **Panama**; accept **Panama** Canal; accept **Panama** Canal Zone]

[10h] Anti-American sentiments in Panama reached a fever pitch after a Panamanian flag was torn in the Canal Zone, causing this 1964 riot during which protestors tore down the Panama Canal’s “fence of shame.”

ANSWER: **Martyrs’ Day** [or **Día de los Mártires**; prompt on **Flag** Incident or **Flag** Protests]

[10m] Panama attempted to re-establish diplomatic ties with the United States through a series of 1977 treaties signed by Jimmy Carter and this Panamanian leader.

ANSWER: Omar **Torrijos** (“toh-REE-hohs”) [or Omar Efraín **Torrijos** Herrera; accept **Torrijos**–Carter Treaties]
<AK, World History>

17. Since lower values of this quantity corresponded with higher metabolic rates, Max Rubner proposed the “heartbeat hypothesis” that lower values of it lead to a lower lifespan. For 10 points each:

[10m] Name this quantity studied in allometry. Metabolic rate scales to the three-fourths power of this quantity according to Kleiber’s law.

ANSWER: body **size** [or body **mass** or body **volume**]

[10e] These animals have the highest metabolic rate among vertebrates. As a result, species in this smallest family of birds need special mechanisms to regulate body heat while hovering in place.

ANSWER: **hummingbirds** [or **Trochilidae**; prompt on **Apodiformes**]

[10h] Many cold-blooded, ectothermic organisms exhibit this type of thermoregulation, where internal temperature varies wildly based on the ambient temperature. Sloths and naked mole rats exhibit this type of thermoregulation, which is the opposite of homeothermic regulation.

ANSWER: **poikilothermic** regulation

<Purdue, Biology>

18. A novel’s protagonist fantasizes of finding her mother homeless and kicking over her begging plate before learning that she died in this manner. For 10 points each:

[10h] Give this cause of death of Cora’s mother Mabel in *The Underground Railroad*. Delia’s abusive husband Sykes dies in this manner in Zora Neale Hurston’s story “Sweat.”

ANSWER: **snakebite** [or **snake** attack; **snake venom**; or being **bitten** by a **snake**; prompt on **venom** or **poisoning** or **animal** attack]

[10m] A rattlesnake bite in a cave on Jackson’s island leads this character to hallucinate a conversation with Voltaire. Those events occur in Percival Everett’s 2024 reimagining of this 19th-century literary character’s story.

ANSWER: **Jim** [accept **James**] (He appears in *The Adventures of Huckleberry Finn*.)

[10e] Jim Burden saves the title Czech farmer’s daughter from a rattlesnake in this author’s novel *My Ántonia*.

ANSWER: Willa **Cather**

<Sheffield B, American Literature>

19. Though not a tax dodge, high-income earners who exceed the income limit use so-called “backdoor” examples of these accounts. For 10 points each:

[10m] Name these retirement accounts whose qualified withdrawals are tax-free compared to traditional types. People eligible for these accounts must earn below 146,000 dollars a year.

ANSWER: **Roth IRAs** [or **Roth Individual** Retirement Accounts; prompt on IRAs or Roths or individual retirement accounts]

[10h] Starting in 2006, 401(k) plans and these tax-advantaged retirement savings plans could hold Roth IRA contributions. These plans are available for employees of public schools and some nonprofits and charities.

ANSWER: **403(b)** plans

[10e] These general funds, into which amounts are set aside for retirement, are often rolled over into Roth IRAs if their lump sum is small. French residents protested a reform bill for these funds that increased the retirement age.

ANSWER: **pensions**

<NS, Social Science>

20. Answer the following about French electronic composer Jean-Jacques Perrey (“peh-RAY”), for 10 points each.

[10m] Perrey earned a roast hedgehog from this musician for backing him on the Ondioline. Stéphane Grappelli played violin on the song “Minor Swing” as part of a quintet led by this musician, who overcame a burnt hand.

ANSWER: Django **Reinhardt** [or Jean **Reinhardt**; prompt on Django] (The quintet is the Quintette du Hot Club de France.)

[10e] The theme song of the Mexican sitcom *El Chavo del Ocho* is from a Perrey album whose punning title, “Moog (“mohg”) Indigo,” refers to a type of this electronic instrument that produces audio signals.

ANSWER: **synthesizer** [or Moog **synthesizer**]

[10h] This composer and Gershon Kingsley co-wrote Perrey’s oft-sampled song “E.V.A.” This composer scored films like *Wild at Heart* for a director who used his song “Falling,” which was sung by Julee Cruise, as the theme for a TV series.

ANSWER: Angelo **Badalamenti** [or Angelo Daniel **Badalamenti**] (David Lynch wrote the lyrics for the *Twin Peaks* theme “Falling” and the rest of the songs on Cruise’s album *Floating Into the Night*.)

<AP, Other Fine Arts>