

Packet of Michigan, Michigan State Students

Packet Finals 1

Packet by: Harris Bunker, Dillon Edwards, Austin Foos, Lucas Weingartz, Trent Koch, Sarah Wrase, Dominic Aluia, Alan Hettinger, Jasmine Czajka, Briana Magin, Tony Incorvati, Erik Bubolz, Siddhant Dogra, Rahul Keyal, Jonathan Suh, Kevin Yu and Vishal Puppala with assistance from many others

Tossups

1. **The two-dimensional form of this technique uses ampholytes to generate a pH gradient that separates species by pI values. This technique often employs sodium dodecyl [pr. “Doh deesyl”] sulfate to confer negative charge and unfold proteins. The products of this technique can be visualized with Coomassie brilliant blue or ethidium bromide and are transferred onto nitrocellulose paper in a (*) Southern blot. This technique’s mobility is equal to the ratio between a molecule’s velocity and the electric potential. Polyacrylamide is a common medium used in— for 10 points— what technique that separates proteins and DNA fragments by size and shape with an electric field?**

ANSWER: **gel electrophoresis** (accept specific types such as **polyacrylamide gel electrophoresis** or **PAGE**; prompt on partial answers)

2. **A character in this play signs the wrong papers because he cannot read, which causes another character to go to an asylum. Near the end of this play, a trumpet is played but no sound comes out. One character in this play quits his job at the A&P so he can devote more time to (*) football. The protagonist of this play becomes a Negro League baseball player and constructs the title entity to keep the Grim Reaper out. This play, which features the character Troy Maxson, is part of its author’s *Pittsburg Cycle*. For 10 points, identify this August Wilson play that was made into a 2016 film starring Denzel Washington.**

ANSWER: **Fences**

3. **In one story featuring this hero, this hero is put into a crystal container and then this hero is nursed by a doe. This hero was depicted naked in the Ramsund carving and owns an invisibility cloak in a story where he appears. In another story, Mimir is this hero’s brother and this hero marries Gudrun. Blood was drunk by this person that allows this hero to understand (*) birds. The birds tell this hero to behead his foster father Regin. This German and Norse hero slayed the dragon Fafnir and went through a circle of fire in another story. For 10 points, identify this son of Sigmund who rescued Brynhild and whose story is told in the *Volsung Saga*.**

ANSWER: **Sigurd** (or **Sigfried**)

4. **In this leader’s country, Anis Amri killed over 50 people after driving a truck into a Christmas Market. This leader’s defense minister notably refused to wear a burqa on a trip to Saudi Arabia. That event followed this leader’s call for a burqa ban (*) “wherever legally possible”. This leader’s party lost regional elections in her home state to the SPD and the far-right AfD. This leader, running for a fourth term, is facing attacks from Frauke Petry. This 2015 *Time* Person of the Year notably led her country into taking in 800,000 refugees. For 10 points, name this leader of the Christian Democratic Union and current German Chancellor.**

ANSWER: Angela **Merkel**

5. A part of the second movement of this symphony was referenced in an oratorio by its composer while a plowman whistles. The composer of this symphony said part of his goal in composing it was to outdo his protégé Ignaz Pleyel. The first movement of this symphony contains a lyrical introduction in 3/4 and its third movement is significant for its quicker *allegro molto*. This symphony got its nickname for an action occurring in its (*) andante and variation form second movement. For 10 points, identify this second London Symphony of Joseph Haydn, known for its unexpected fortissimo chord.

ANSWER: Haydn's 94th Symphony (or Surprise Symphony, H I/94)

6. TEM studies nanocrystalline versions of these objects in groups such as III-V [pr. "Three Five"]. An early photovoltaic cell was made with the help of one these objects that was coated in gold at the junctions by Charles Fritts. A gap in these objects between the Fermi level and another level exists by the band theory of solids. One type of these objects includes trivalent (*) impurities, which create deficiencies or holes of valence electrons in these objects. Diodes are an example of these devices that often come in P or N types and exhibit doping. For 10 points, what devices, often made of germanium or silicon, resist worse than insulators?

ANSWER: Semiconductor

7. This man wrote that the Devil "prowls around like a roaring lion" looking to devour someone. Later, this man raised the pious widow Dorcas from the dead. After having a vision of unclean beasts that he refused to eat, he converted the centurion Cornelius, who is the first gentile (*) Christian. This man's mother-in-law was miraculously healed from a fever by his teacher, who promised to make this man and his brother Andrew "fishers of men". This man would later deny that teacher three times before a rooster crowed. For 10 points, name this apostle that the Catholic Church considers to be the first pope.

ANSWER: St. Peter (accept Cephas or Simon Peter)

8. Description acceptable: In the first one of these events, a European ruler met with Sultan Abdelaziz and then toured the capital city on a white horse. Because of that meeting, foreign minister Théophile Delcassé said no conference was required, which irked Count Bernhard von Bülow. (*) The second one of these events was sparked after one country sent troops into the country where these events took place, and Germany responded by sending the SMS *Panther* into the port of Agadir. For 10 points, name these international incidents between France, Britain and the Empire of Germany, concerning imperial influence in a North African country.

ANSWER: Moroccan Crises (Accept 1st Moroccan Crisis until "second", accept anything like "European powers fighting over Morocco" or "land grabs in Morocco")

9. One statue of this figure was around 4 feet tall, had gold paint on the trim of its clothes and was completed by Verrocchio. After completion, another sculpture of this figure replaced Donatello's *Judith and Holofernes* in front of the Palazzo Vecchio [pr. "Vekkio"] in (*) Florence, where it was positioned with its eyes facing toward Rome. In a bronze nude statue of this figure, commissioned by the Medici, this figure has a sword in his right hand and a distinctive cap on his head. In 1991, a man attacked a statue of this figure with a concealed hammer. For 10 points, name this Biblical figure set to sculpture by both Donatello and Michelangelo who slew a giant.

ANSWER: David

10. In one novel by this author, a character remembers touching the leg of a teenage girl on a plane but no consequences occur due to his social status. Jacobus alerts the industrialist Mehring about a dead body found on his property in one novel by this author. In another novel by this author of (*) *The Conservationist*, the protagonist is a former servant of the white Smales family, and that novel ends with Maureen chasing a helicopter. For 10 points, name this South African novelist of *Burger's Daughter* who also wrote about a revolution against apartheid in *July's People*.

ANSWER: Nadine Gordimer

11. The theologian and author of *Courage to Be*, Paul Tillich, is sometimes cited as a proponent of this belief. In a scene in which this idea is discussed, a character asks, “Who gave us the sponge to wipe away the entire horizon?” Eternal recurrence is discussed in the same work where this concept originates. This phrase is uttered by a screaming Madman (*) as he smashes his lantern on the ground. The creator of this concept asks readers to focus on personal freedom over escapism. This concept, explored in the *Gay Science*, says that western thought places moral value on things independent of a perhaps arbitrary source. For 10 points, identify this nihilistic phrase about a deity that was penned by Nietzsche [pr. “Neet shuh”].

ANSWER: God is Dead (accept “Gott ist Tot”, prompt on “nihilism” until “phrase” is read)

12. At the event where this painting debuted, a friend of the artist, socialist Pierre Proudhon, was quoted. The basket in the left side of this painting is to the left of the shadow created by the overall-wearing title figure. A pot and a newspaper appear near a bush, and a basket-carrying boy has a hole (*) in his shirt in this painting that debuted at the Paris Salon. A man in the right side of this painting is wearing a straw hat and holds a pickaxe. For 10 points, identify this realist painting destroyed during World War II in which two workers fracture rocks which was painted by Gustave Courbet.

ANSWER: The Stone Breakers

13. In a novel by this author, a man observed a transparent lizard on his roof and visits the zoo. This author of *Mr. Palomar* wrote a story in which characters jump from the earth to the moon to harvest cheese. In a novel by this author, a character visits Professor Uzzi-Tuzii to learn about (*) Cimmeria; that novel, written in second person, centers around a character attempting to find the end of a book he started while romantically pursuing Ludmilla [pr. “lood mi yuh”]. For 10 points, identify this Italian author of *If on a winter's night a traveler*.

ANSWER: Italo Calvino

14. If the distance between two outputs of a function are less than K times the distance between the points evaluated, then the function has the Lipschitz version of this property. Rigorously, given an epsilon positive, there exists a delta such that if the distance between p and x is less than delta, the distance between f of p and f of x is less than (*) epsilon if this property holds. If a function is differentiable at a point, it must have this property at that point. For 10 points, identify this mathematical property that roughly means a function can be drawn without the pencil leaving the paper.

ANSWER: Continuity (accept continuous, uniform continuity, Lipschitz continuous, continuously differentiable, etc.)

15. Jubal Early launched an attack on this city in the Battle of Fort Stevens. The “Battle Hymn of the Republic” was written after Julia Howe watched the 6th Wisconsin Volunteers sing “John Brown’s Body”, while marching in this city. Thomas Jordan set up a spy-ring in this city whose members included Rose O’Neal Greenhow. (*) Andrew Johnson called for the Grand Review of the Army in this city to help lighten the mood of this city after one event. John Wilkes Booth murdered then-President Abraham Lincoln at the Ford Theater in this city. For 10 points, name this city, the capital of the Union States during the Civil War.

ANSWER: Washington D.C. (accept The District of Columbia)

16. **Another poem related to the same subject as this poem was based on the observations of Reverend Gilpin. The “mind shall be a mansion,” while memory shall be a “dwelling place” in this poem whose speaker compares “wreaths of smoke” to a Hermit. “Unripe fruits” have a “green hue” in this poem in which the speaker romanticizes the “sylvan Wye” (*) river. The speaker of this poem addresses his “dear, dear sister” and the beginning mentions “five years” and “five summers”. For 10 points, identify this last poem in *Lyrical Ballads* that was written by William Wordsworth and named for a monastery.**

ANSWER: "Lines Composed a Few Miles Above Tintern Abbey, On Revisiting the Banks of the Wye During a Tour. July 12, 1798."

[Editor's Note: Gilpin's poem is also called "Tintern Abbey".]

17. **This man went to university on scholarship in Paris, where he joined the *Cercle Marxiste* and the French Communist Party. Students were rejected from joining this man's guerilla army, which opposed the government of Lon Nol. (*) Relations between this man's government and its Eastern neighbor deteriorated during his rule, leading to a Vietnamese invasion that ousted him from power. This man is infamous for his “killing fields”, where “depositees” were supposedly forced to dig their own graves before being buried alive in them. For 10 points, name this Cambodian revolutionary and Prime Minister who led the Khmer Rouge government from 1976 to 1979.**

ANSWER: Pol Pot (or Saloth Sar)

18. **One current player in this baseball position was traded along with Jose Briceno to the Los Angeles Angels in 2015. A player nicknamed “the wizard” played excellent defense at this position for the St. Louis Cardinals. Though not third base, while playing for the Seattle Mariners, Alex Rodriguez played this position (*) as did Ozzie Smith for the Cardinals. Cleveland Indian Francisco Lindor and NL rookie of the year Corey Seager were 2016 All Stars at this position. The leader in hits from this infield position is Derek Jeter. For 10 points, identify this infield position between the third and second baseman.**

ANSWER: Shortstop (prompt on “SS”)

19. **In the last step of the Birch reduction, these compounds donate a proton to an intermediate anion, forming an isolated diene. This class of compounds can be prepared by reacting Grignard reagents with ketones or aldehydes. A mixture of around 4.4% water and 95.6% one of these compounds has a boiling point lower than that of its constituents and thus is a well-known example of a positive azeotrope. (*) Lightly oxidizing the primary type of these compounds yields carboxylic acids. For 10 points, name this class of compounds that contains hydroxyl groups, examples of which include methanol and ethanol.**

ANSWER: alcohols (prompt on hydroxyls before mentioned, prompt on R-OH, prompt on OH group)

20. **When originally formed, this entity's official purpose was to “avenge the wrongs they suffered by ravaging the territory of the king”. This entity allowed its leading member to gain naval supremacy of the Eastern Mediterranean, but the increasing control of that city over this entity led to rebellions by (*) Naxos and Thasos. It was opposed by the Persian Empire and, later, the Peloponnesian League, which forced this organization to disband in 404 BCE. For 10 points, name this alliance of Greek city states under the hegemony of Athens, which was formed after the withdrawal of Sparta from the Greek and Persian Wars.**

ANSWER: Delian League

21 (TB). Kamel Daoud wrote a 2013 novel about this character's "Investigation." In prison, this character is entertained by an article about the murder of a Czech man, but mourns the lack of cigarettes. He describes waves "lapping the hot sand in little, flurried gasps" before withdrawing a gun after spotting the brother of a woman who had an affair with this man's friend Raymond Sintès. During a trial, this character is criticized for not crying during his mother's funeral. For 10 points, name this man who is incriminated for shooting an Arab on a beach—the protagonist of Albert Camus' *The Stranger*.

ANSWER: Meursault (prompt on "The Stranger" before mention)

22 (TB). In a two-act opera by this composer, a baritone character sings “But as ambition is your beginning, power's the end you're seeking.” This composer created several pieces for the tenor Peter Pears. “What harbor shelters peace” is sung by a character in another opera by this composer of *The Rape of Lucretia*. The title character is questioned over his apprentice's death at sea in another opera by this man. A piece by this composer performed at Coventry Cathedral was inspired by Wilfred Owen. One piece by this composer introduces instruments to children. For 10 points, identify this composer of *Peter Grimes*, *War Requiem*, and *The Young Person's Guide to the Orchestra*.

ANSWER: Benjamin Britten

Bonuses

1. For 10 points each, identify some court cases in which the Supreme Court expanded the doctrine of selective incorporation.

[10] The Court selectively incorporated the 4th amendment in this case by ruling that police cannot use evidence that was illegally seized. In this case, the police did not use proper probable cause to seize some dirty magazines.

ANSWER: **Mapp** v. *Ohio*

[10] The 5th Amendment was expanded because of this case that formalized the rights police must read while arresting suspected criminals. The plaintiff of this case signed a confession but did not know his right to counsel.

ANSWER: **Miranda** v. *Arizona*

[10] Specifically focusing on the first amendment, this case overturned the precedent set forth in *Barron v. Baltimore* and allowed for selective incorporations of the Bill of Rights.

ANSWER: **Gitlow** v. *New York*

2. For 10 points each, answer some questions about religion in Lebanon.

[10] This small syncretic religious group is an offshoot of Shia Islam and calls its followers “muwaḥḥidūn”. This group, whose followers also live in Israel, Syria, and elsewhere, allows no conversion in or out of the religion.

ANSWER: **Druze** (or **Duruz**)

[10] This Christian sect hails from Mount Lebanon and uses Aramaic in some religious practices. Saint Rafka is particularly venerated by this sect.

ANSWER: **Maronite** Christianity (accept **Maronite** Church of Lebanon)

[10] According to the CIA World Factbook, 8% of the population of Lebanon belongs to this Eastern Orthodox sect whose liturgies are done in Koine. This group venerates the Patriarchs of Constantinople.

ANSWER: (Lebanese) **Greek** Orthodox Church (prompt on “Eastern Orthodox”)

3. The protagonist of this novel is raised by the uncle of the wicked Blifil, Squire Allworthy. For 10 points each:

[10] The runaway Sophia Western is sought after by the protagonist of what English novel about a character who also has a relationship with Arabella Hunt?

ANSWER: *The History of* **Tom Jones**, *A Foundling*

[10] *Tom Jones* was written by this eighteenth century British novelist who also wrote *Amelia*.

ANSWER: Henry **Fielding**

[10] This impossibly lengthy early British novel by Samuel Richardson also contains a female character that runs away from home with Robert Lovelace.

ANSWER: **Clarissa**, or, *the History of a Young Lady*

[Editor’s Note: supposedly the longest English novel based on word count.]

4. Horses have appeared in paintings for as long as people could remember what horses looked like. Answer some questions about horses in art for 10 points each:

[10] Only a horse’s head appears in this Thomas Fuseli painting in which a golden incubus sits atop a lying woman’s body.

ANSWER: **The Nightmare**

[10] Jacques-Louis David painted several versions of this French general on horseback as he crosses the Alps.

ANSWER: **Napoleon** Bonaparte (prompt on Bonaparte)

[10] This Catalan surrealist depicted a beige horse in his *Horse, Pipe and Red Flower*. This artist is also known for his sculpture named after Chicago.

ANSWER: Joan **Miró** i Ferrà

5. These computer objects contain a user's unique ID tag. For 10 points each:

[10] Name these objects that come in temporary and permanent forms that log information about a user's website visit.

ANSWER: HTTP cookies

[10] Cookies can be turned off when using these programs that allow users to access the world-wide web. Some examples of these programs include Firefox and Opera.

ANSWER: Web Browsers

[10] Cookies can be accessed using this web feature that affects how web pages are displayed. This feature also allows developers to have multiple styles on a page at once.

ANSWER: CSS (or Cascading Styl e Sheets)

6. Simeon the Great ruled over this empire's golden age. For 10 points each:

[10] Name this Slavic adversary of the Byzantine Empire that the Byzantine Emperor Basil II was a "slayer" of.

ANSWER: Bulgaria (accept just Bulgars)

[10] Simeon the Great spent 27 years creating this capital of the Bulgarian Empire that included the Round Church and was the site of a literary school that moved from Pliska.

ANSWER: Preslav

[10] Along with his brother Methodius, this man helped create the Glagolitic alphabet and helped transcribe Old Church Slavonic. He is sometimes known as the Apostle of Bulgaria.

ANSWER: Saint Cyril

7. In one play by this author, Dr. Gall heads the psychological and experimental department of the title organization. For 10 points each:

[10] Identify this Czech author in whose play Radius leads a revolt on an island where Radius is a forced laborer for Domin.

ANSWER: Karel Čapek [pr. "Chu-peck" but accept phonetic answers]

[10] Čapek wrote the play *R.U.R.* in which these automatons were constructed by Rossum. One "rule" about these things says they cannot intentionally harm humans.

ANSWER: Robots (or Robiti)

[10] This author created three rules of robotics in his sci-fi short story "Runaround". Dr. Calvin is also featured in this author's collection *I, Robot*.

ANSWER: Isaac Asimov

8. A character in this film is dismissed from his job after lesions begin appearing on his face. For 10 points each:

[10] Identify this film starring Tom Hanks and Denzel Washington, about a lawyer with AIDS suing his former employer.

ANSWER: Philadelphia

[10] *Philadelphia* was directed by this man, also known for directing *Rachel Getting Married* and the 2004 remake of *The Manchurian Candidate*.

ANSWER: Jonathan Demme

[10] Jonathan Demme is best known for directing this 1991 thriller, in which Clarice Starling enlists the help of cannibalistic serial killer Hannibal Lector to track down Buffalo Bill.

ANSWER: Silence of the Lambs

9. The Argonauts sought the Golden Fleece, and for 10 points each you need to identify some Argonauts.

[10] Some stories of the *Argo* say that this woman was aboard *The Argo*. This woman followed Meleager aboard the *Argo* and may have suffered an injury at the battle of Colchis.

ANSWER: Atalanta (accept Atalante)

[10] This leader of the Argonauts was brought up by the centaur Chiron and was aided by Hera and Athena.

ANSWER: Jason (accept Iason)

[10] This pious king of Phere was also aboard *The Argo* according to Apollonius of Rhodes. Apollo was forced to serve this man for a year and helped this man wed Alcestis.

ANSWER: Admetus

10. Answer the following about the emission and absorption of light for 10 points each:

[10] Name the kind of light energy that is emitted by the surface of the Earth; this kind of light has wavelengths slightly longer than visible light.

ANSWER: Infrared Light

[10] Scientists use this law to determine concentration of a solution by how much light it absorbs. This law is commonly given as $A = abc$.

ANSWER: Beer's Law (Accept Beer-Lambert law)

[10] Beer's Law is used in this technique, which involves observing a substance's absorption of light. The ultraviolet and visible regions are scanned in a common form of this technique.

ANSWER: absorption spectroscopy

11. This country's inhabitants celebrate the year's end with a parade called Junkanoo. For 10 points each,

[10] Identify this island nation off the east coast of Florida. This popular vacation destination has a capital at Nassau.

ANSWER: Commonwealth of the Bahamas

[10] When the Bahamas were a British possession, they were briefly governed by this brother of King George VI. This man abdicated the British throne after his affair with Wallis Simpson.

ANSWER: Edward VIII

[10] Identify the largest island in the Bahamas which is larger than all the nation's other islands combined.

ANSWER: Andros

12. Answer some questions about a certain Republican campaign that wasn't talking about how much money the candidate made for 10 points each.

[10] This candidate ran as the moderate Republican of the race, and was on the list of top picks for running mate of Donald Trump because of his gubernatorial experience in the key swing state of Ohio.

ANSWER: John Kasich

[10] Kasich's campaign was managed by this man who had managed John McCain's failed 2000 and 2008 presidential campaigns.

ANSWER: John Weaver

[10] Kasich consistently gave himself this title while on the campaign trail to separate himself from the rest of the pack. This title comes from Luke 11:11-14, and Chris Christie criticized Kasich for this title.

ANSWER: "Prince of Light"

13. Saddam Hussein didn't just fight wars against the Bushes and the USA. For 10 points each:

[10] Name this conflict that lasted from 1980 to 1988. It began when Hussein launched a surprise attack against his country's neighbor that was quickly halted. This war contained the Battle of Khorramshahr.

ANSWER: **Iran-Iraq War**

[10] The Iran-Iraq War erupted out of fears that this event would spark an uprising among the Iraqi Shia minority. Iraq also hoped to capitalize on the instability this 1979 event caused in Iran in which the Ayatollah took power.

ANSWER: **Iranian Revolution** (accept obvious equivalents)

[10] Iraqi militias of this ethnic group sided with Iran during the war. That support led to Hussein later using chemical attacks against these people.

ANSWER: **Kurds**

14. Mr. Summers is in the charge of the title event of this short story—supposedly because he has a lot of free time. For 10 points each:

[10] Identify this short story in which Tessie Hutchinson is chosen, yells "it wasn't fair", and is then stoned.

ANSWER: **"The Lottery"**

[10] "The Lottery" was written by this author who created the ostracized Blackwood family in *We Have Always Lived in a Castle*.

ANSWER: Shirley **Jackson**

[10] In addition to *We Have Always Lived in a Castle*, this other 60's mystery novel was turned into a movie. The title character of this Ira Levin novel is concerned that her neighbors in the Bramford apartment building are Satanic cultists.

ANSWER: **Rosemary's Baby**

15. This poet dedicated a poem to Elizabeth Bishop that mentions a creature who "drops her ostrich tail" while searching for sour cream. For 10 points each:

[10] Please name this poet of "Skunk Hour" who memorializes the old south Boston Aquarium in "For the Union Dead".

ANSWER: Robert **Lowell**

[10] Robert Lowell's relative James Russell Lowell was a member of the 19th century Fireside poets along with Oliver Wendell Holmes Sr. who wrote this poem about "by life's unrelenting sea!" which was about a sea creature.

ANSWER: **"The Chambered Nautilus"**

[10] Another fireside poet was William Cullen Bryant, whose poem "Thanatopsis" concerns this grim figure who "approaches" a "grave".

ANSWER: **Death** (prompt on "The Grim Reaper")

16. This founder of social anthropology wrote the book *The Argonauts of the Western Pacific*. For 10 points each:

[10] Name this Poland-born anthropologist who argued that the mind of so-called primitive peoples was the same as civilized people.

ANSWER: Bronislaw **Malinowski**

[10] This system of gift exchange was described by Malinowski. This system from east of Papua New Guinea shows how cultures avoid cheating through trade.

ANSWER: **Kula** Ring

[10] This sociologist studied the kula ring and potlatch of the Pacific Northwest in his 1925 book *The Gift*.

ANSWER: Marcel **Mauss**

17. The discovery of these particles is partly responsible for the “Particle Zoo”. For 10 points each:

[10] Identify these subatomic particles that can come in top, up, charm and strange flavors.

ANSWER: **Quarks**

[10] A neutron is made of this unique quark combination because quarks do not have integer charge values.

ANSWER: **One Up** quark and **Two Down** quarks (both answers required)

[10] Sometimes four quarks can be together such as in these zero baryon number particles that have quantum numbers outside what is predicted by the quark model. These particles include glueballs and tetraquarks.

ANSWER: **Exotic Meson** (accept **Hybrid Meson**, prompt on “Meson”)

18. Answer the following about Anglo Saxon England for 10 points each.

[10] This collection of kingdoms such as Wessex and Mercia eventually merged into the kingdom of England. This term is attributed to Henry of Huntingdon.

ANSWER: **Heptarchy**

[10] This English king, the only one with the epithet of “the Great”, unified the seven Saxon kingdoms and was anointed king by Pope Leo IV.

ANSWER: **Alfred** the Great

[10] Alfred the Great won this battle over the Vikings in 878 that scared them back to Chippenham. After this battle, the belligerent sides signed the Treaty of Wedmore.

ANSWER: Battle of **Edington**

19. This cycle includes symphonic poems such as “The Moldau”. For 10 points, each:

[10] Identify that cycle about homeland that also features a song about a river that runs through Prague and “Vltava”. Water Nymphs and a wedding also appear in this work that features a flowing woodwind section.

ANSWER: **Má Vlast**

[10] Má Vlast was composed by this composer who, like Beethoven, went deaf. This composer is also famous for his “From My Life” quartet and his opera *The Bartered Bride*.

ANSWER: Bedřich **Smetana**

[10] Smetana hailed from this modern-day country and wrote music during an 1848 uprising in this country that is also home to the composer of many Moravian folk songs, Leoš Janáček.

ANSWER: **Czech** Republic or **Czechia** (anti-prompt on “Moravia” or “Bohemia”)

20. For 10 points each, answer some questions about the plasma membrane and its role in cell signaling.

[10] This type of receptors embedded in the phospholipid bilayer are vital to the endocrine system. A ligand binds to these receptors to activate signal transduction.

ANSWER: **G-protein** coupled receptors

[10] The binding of certain hormones to the plasma membrane can induce this event, where a chain reaction of signal transduction occurs.

ANSWER: **Phosphorylation cascade**

[10] These chemicals, which are produced by glands such as the pituitary or the thyroid are received by receptors on the surface of a cell.

ANSWER: **hormones**

21 (TB). Answer some questions about Japanese expansion before the attack on Pearl Harbor for 10 points each.

[10] In 1937, Japan invaded this country. This country had been ravaged by civil war between the Communists, the Nationalist KMT, and numerous local warlords for years which made it a prime target for Japanese expansion.

ANSWER: **China**

[10] The first major fighting of the war occurred in the assault on this coastal Chinese city. Peter Harmsen described this battle as the “Stalingrad of the Yangtze” because of its immense casualties.

ANSWER: **Shanghai**

[10] Japan announced the creation of this organization in 1940. The supposed purpose of this organization was to liberate Asia from Western Civilization and promote self-sufficiency. It served as the propaganda machine that justified Japanese imperialism.

ANSWER: **Greater East Asia Co-Prosperity Sphere**