

Packet of Michigan, Michigan State Students

Packet 16

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Tossups

1. One character that appears in a novel by this man enjoys the view from “Mount Vision,” and accidentally shoots Oliver while trying to kill a deer. That man is Judge Marmaduke. Another novel by this author details the only time its protagonist is in love and shows him leading a young girl through the wilderness. In another novel by this author of (*) *The Pathfinder*, the protagonist helps Chingachgook rescue his betrothed, Wah-ta-Wah. That same protagonist appears in another of this man’s novels, in which he, now known as Hawkeye, guards a caravan headed for Fort William Henry. For 10 points, name this creator of Natty Bumppo who also wrote *The Last of the Mohicans*.

ANSWER: James Fenimore Cooper

2. The corda or rack was used as part of this event in which the hands of a person were tied to a wooden frame and stretched. One decree that coincided with this event was only formally revoked after Vatican II in the 20th century. That decree was the (*) Alhambra Decree. Sentencing during this event took place at the *auto da fe*. The Marranos were especially targeted during this event which was led by the Dominican Tomás de Torquemada. For 10 points, name this European event started under Ferdinand and Isabella in which non-Christians were often tortured into conversions that took place in an Iberian country.

ANSWER: Spanish Inquisition (prompt on Inquisition)

3. A wordline is relevant to a 4-dimensional formulation that helps explain this theory whose symmetry can be explained by a Poincaré [pr. “Poin-car-ay”] group. A variable symbolized gamma is in the denominator of the formula for the Lorentz Contraction, which is related to this theory. This theory suggests that a particle’s speed is less than v plus v prime and these facts from inertial reference frames imply (*) time dilation. For 10 points, identify this theory which suggests that there is an absolute limit for the speed of light that is often contrasted with its formulator’s “general” theory.

ANSWER: Special Relativity (prompt on relativity)

4. In 2016, this man asked the United States for a Supertanker after a series of wildfires and arsons hit his country. This man brazenly claimed that Grand Mufti Amin al-Husseini convinced Hitler to kill the Jews. In 2015 Time claimed that this man appeared in front of Congress to derail a meeting between Mossad and the United States to stop the (*) Iran Nuclear Deal. This leader, who replaced Ehud Olmert in his current position, berated John Kerry and the United States for abstaining its vote on a UN bill that would end Settlement building in the West Bank. For 10 points name this Likud leader who is the current Prime Minister of Israel.

ANSWER: Benjamin “Bibi” Netanyahu

5. A hymn attributed to this man was published in a collection by Johann Walter's and was once set to music by JS. Bach. As evidenced by his correspondence with Reverend Spalatin, this priest wanted to convert Jews to Christianity, but, failing that, he argued for burning synagogues in *On the Jews and Their Lies*. (*) Johann Tetzel particularly angered this figure and caused him to write his most famous scholarly work. This figure said that people could reach Salvation through Biblical study and good works alone instead of through the buying of indulgences. For 10 points, which German monk who nailed his 95 Theses to a church and started the Reformation?
ANSWER: Martin Luther

6. This thinker invented a method of The Fast Fourier Transform before Fourier formulated his idea in 1807. This scientist synthesized the work of Euler, Fermat, Lagrange and Legendre in his *Disquisitiones Arithmeticae*. This mathematician also proved that a regular heptadecagon could be constructed (*) with a straightedge and compass. Supposedly, this mathematician found a way to add all the numbers between 1 and 100 when he was a child. One method named after this man uses row reduction to solve a system of linear equations. For 10 points, identify this German mathematician also known for the normal distribution.
ANSWER: Johann Carl Friedrich Gauss

7. This author omitted a poem whose title character is depressed and jumps into a volcano. The "oft-read tale" of Glanvil is mentioned in a poem by this author whose opening line mentions "a shepherd from the hill". This poet proclaims that the spires of Oxford are "dreaming" in a poem in which the speaker asks "Why faintest thou!" That poem was written after the death of his friend (*) Arthur Hugh Clough. The most famous poem by this author says "Sophocles Heard it on the A gaeon" and he wrote "Thyrsis". For 10 points, name this author who mentioned the "ignorant armies" that "clash by night" in his poem "Dover Beach".
ANSWER: Matthew Arnold

8. Transcription factors Sox2 and c-Myc were used to induce some other cells to act like this group of cells. One type of this cell may be isolated and exhibit immunomodulatory properties. Those cells are known as mesenchymal ["my-zen-ky-mal"]. These human cells have been used in veterinary medicine to treat ligament injuries in horses. (*) Whole blood apheresis is a process like blood donation where these cells are extracted. These cells, which can be harvested from the iliac crest, are totipotent. For 10 points, name these cells, which can be used to treat leukemia by bone marrow transplant, whose embryonic type has been the subject of controversial research.
ANSWER: Stem cells

9. In a study about this process, NYU researchers shocked the California sea slug to see if they would form a molecular context. A disease relating to this process occurs in the medial temporal lobes and can damage the basal forebrain. Long data can be broken down and grouped by (*) chunking in this process. A form of this psychological process is described by Miller's Law to be constrained by 7 plus or minus 2. This faculty is impaired by retrograde amnesia. For 10 points, identify this neurological faculty that comes in short and long term varieties.
ANSWER: memory (accept long term and short term memory)

10. The first act of this opera ends when a character reveals his father's name, and sings the love-duet "Wintersturme," with his lover, who is revealed to be his twin sister Sieglinde. The second act of this opera features the death of both Hunding and (*) Siegmund. The opening of the final act of this opera features an eight-minute-long "galloping" prelude that is the "Ride of the" title figures. For 10 points, name this opera by Richard Wagner describing the conception of Siegfried, the second of his *Ring Cycle*, which is titled for the Norse women who bring slain heroes to Valhalla.
ANSWER: The Valkyries or Die Walküre

11. One leader of this kingdom and his mother were expelled by his father because he was illegitimate. Those two settled with the Mthethwa. After help from Dingiswayo, that ruler would succeed Senzangakona. One ruler of this kingdom massacred over 500 men, women, and children from a group of (*) Voortrekkers after they returned cattle that had been stolen from this state. This state's loss at the Battle of Rorke's Drift was depicted in a 1964 film. This nation destroyed a group of 1,200 British and allied soldiers at the Battle of Isandlwana. For 10 points, name this South African kingdom, which was united by Shaka the Great in the 1820s.

ANSWER: Zulu Kingdom/Empire

12. A 1988 historical novel based on the author of this work was written by Amin Maalouf. One poem in this larger work said "And this reviving Herb whose tender Green / Fledges the River-Lip on which we lean". (*) In another section, the author of this collection mentions "The Moving Figure" that "writes, and having writ, moves on". Another poem from this collection describes "A Jug of Wine, a Loaf of Bread, and Thou". One hundred one AABA rhymed quatrains were selected by Edward FitzGerald from this collection. For 10 points, identify this collection of poems originally written in Persian by Omar Khayyam.

ANSWER: The Rubaiyat of Omar Khayyam

13. According to Thucydides, this mythological person, who was supposedly conceived in the Dikteon Cave, was the first ancient king to build a navy. This mortal was sent a pure white bull by Poseidon and was pursued by Scylla. This man's son Androgeos was murdered after doing well at the (*) Athenian Olympics, so this man decided to punish Athens. Along with Aecus and his brother Rhadamanthys, this man judged the dead in Hades and had the final vote. This man imprisoned Icarus and Daedalus after Daedalus created the Labyrinth in which Athenian youths were sacrificed to the minotaur. For 10 points, identify this legendary Cretan king.

ANSWER: King Minos

14. The owner of a NBA team that *used* to play in this city swapped franchises with Irv Levin, the owner of the Boston Celtics. That team was then moved to San Diego. In the 1970s, a team that plays in this city was notable for its French Connection line which included Gilbert Perreault. 2016 NHL All-Star forward Ryan O'Reilly plays in this city whose NFL team featured receivers Eric Moulds (*) and Andre Reed. The NFL team that plays in this city includes players such as Marcell Dareus and Sammy Watkins on its roster and hired the bombastic Rex Ryan in 2015. For 10 points, identify this New York city home to the NHL's Sabers and the AFC East team, the Bills.

ANSWER: Buffalo, New York (accept Buffalo Braves, Buffalo Sabers, and Buffalo Bills)

15. This type of reaction may be used to make sulfur dioxide in the contact process. If this type of reaction does not proceed to completion, it can produce acetaldehyde from ethanol and (*) carbon monoxide from hydrocarbons. A relatively slow variant of this type of reaction is known as smoldering, and this reaction type is achieved by compression in a typical diesel engine. One mole of propane undergoing this reaction produces three moles of carbon dioxide and four moles of water. For 10 points, name this highly exothermic redox reaction involving a fuel and oxidant whose rapid form is commonly referred to as fire.

ANSWER: combustion reaction (prompt on redox reaction)

16. An artist from this country depicted the title sea creature hanging on a kitchen wall in his work *The Ray*. In another painting from this country, a statue of Venus stands to the right of several couples preparing to board a boat on the title birthplace of Venus (*); that piece is in the *fete galante* style. A man appears to look up the bright pink dress of a woman pushed on the titular conveyance in a work from this country entitled *The Swing*. An artist from this country was patronized by Madame de Pompadour. For 10 points, identify this country whose Rococo painters included Jean-Honore Fragonard and John-Antoine Watteau.

ANSWER: France

17. This leader's plans for an amphibious assault were outlined in Operation Chromite which caused a battle in which the USS Rochester was unsuccessfully bombed. A general dislike of campaigning significantly hindered his chances at the 1952 GOP primary where he would eventually bow out by endorsing Robert Taft. This man, who gave the (*) "Old Soldiers Never Die" speech, was replaced by Matthew Ridgeway as the Commander of United Nations forces after he suggested using Nuclear Weapons against China during the Korean War. For 10 points, name this American general who led the American island hopping campaign in the Pacific during World War II.

ANSWER: Douglas Macarthur

18. To prove her literacy, a character in this novel writes "The Cops are Here" on a sheet of a paper. A family in this novel moves to the Gorbeau House and lives under the pseudonymous last name of Jondrette. One character in this novel is forced to sell her teeth after losing her job at a factory and is the mother of (*) Cosette. That woman is Fantine. In the beginning of this novel, the protagonist is released from prison and steals a bishop's silverware after he is released from prison for stealing bread for his sister. For 10 points, name this novel about Jean Valjean and Javert that was written by Victor Hugo.

ANSWER: Les Miserables (generously prompt on *Les Mis*, accept The Miserables)

19. Chinese immigrant workers built the Panamint City in this geographical region in which the twenty mule teams rolled out from. The ancient glacial Lake Manly used to exist on the same spot as this feature and was the end of a chain of lakes that began with (*) Mono Lake. This geographic feature is in the Great Basin east of the Sierra Nevada mountains. Furnace Creek in this feature, known for its borax salt pans, holds the record for the highest recorded air temperature in the world at 134 degrees Fahrenheit. For 10 points name this feature in California, the lowest point in North America.

ANSWER: Death Valley

20. At the urging of Richard Nixon, this man led his country to join the G6, and giving the finger is sometimes known as this man's "salute". This man claimed to have said "fuddle duddle" when accused of mouthing profanity in the Parliament. He gained popularity when he did not flinch while his opponents threw rocks at him (*) during a Baptiste Day celebration. This man legalized homosexual acts, which he defended by claiming the state had no place "in the bedrooms of the nation". Later, this man invoked the War Measures Act to deal with the kidnapping of James Cross and Pierre Laporte during the October Crisis. For 10 points, name this former prime minister of Canada, whose son Justin is currently serving in the same position.

ANSWER: Pierre Trudeau (prompt on Trudeau)

21. (TB) A painting by this artist, depicting a sleeping young boy with a dog, was recently recovered after having been stolen in 1976. This artist depicted himself sitting at an easel and while looking at himself in a mirror in his *Triple Self-Portrait*. A young girl is escorted by four men in uniform in front of a wall spray-painted with a racial epithet in a work by this artist addressing racism in America. This artist included *Freedom of Worship* and *Freedom from Want* in his “Four Freedoms” series. For 10 points, identify this American artist, known for his depictions printed in the *Saturday Evening Post*.

ANSWER: Norman **Rockwell**

22. (TB) One species from this phylum, *Artemia salina*, makes embryonated cysts which are capable of anhydrobiosis before developing into adults. The genus *Cataglyphis* are desert organisms known for their exceptional navigational ability when foraging for organisms from this same phylum. Xeric organisms from this phylum possess a lipid epicuticle to prevent desiccation. The extinct class Trilobita from this phylum were the first organisms to evolve sight. All organisms from this phylum have jointed limbs and exoskeletons made of chitin [pr. *kite-in*]. For 10 points, name this most common phylum on Earth, whose members include crabs, spiders, and many insects.

ANSWER: **Arthropoda** or **arthropods**

Bonuses

1. This field's applications in biology include screening for cancer by measuring the amount of proteins in a sample via mass spectrometry. For 10 points each:

[10] Name this field in analytical chemistry that involves the determination of the abundance of substances in a sample. IUPAC distinguishes this field from a similarly named one by stating that the results in this field "may be expressed as a numerical value in appropriate units."

ANSWER: quantitative analysis (anti-prompt on gravimetric / volumetric analysis)

[10] The liquid level in a graduated cylinder or burette must be read at the bottom of this curve. This curve, caused by surface tension, must be measured at eye level to eliminate parallax error.

ANSWER: meniscus

[10] When recording quantitative measurements, these digits are important in reflecting the precision of a measurement. For multiplying two numbers, the number of these digits expressed in the product depends on the number of digits expressed in the least precise number being multiplied.

ANSWER: significant figures or digits (prompt on expressed decimal places or similar)

2. For 10 points each name some foods that may be delicious or disgusting, depending on who you ask:

[10] This luxury food item is produced by force-feeding ducks or geese twice a day to ensure fat build up of their liver. It is commonly prepared in a mousse or served with steak.

ANSWER: Foie gras ["fwah grah"]

[10] Sea urchin roe is a delicacy in some areas of the world. In Japan it can sell for as much as \$450 per kilogram and is known by this name.

ANSWER: Uni

[10] In China, the "century" type of this food product is preserved in a mixture of clay, ash, salt, quicklime, and rice hulls for several weeks up to several months.

ANSWER: Century egg (accept 100-year egg)

3. This possibly misattributed play contains a chorus who criticize the humility of the title character who refuses to gloat about giving fire to humans. For 10 points each:

[10] First, identify this play in which the title character is a prisoner of Hephaestus, Violence and Power.

ANSWER: Prometheus Bound

[10] *Prometheus Bound* was presumably written by this Greek tragedian who penned the *Oresteia* trilogy.

ANSWER: Aeschylus

[10] This second play of the *Oresteia* sees Orestes confront his sister Electra about the murder of their father Agamemnon. Later, the furies get mad at Orestes for killing his murderous mother Clytemnestra.

ANSWER: Libation Bearers (or Choephoroi)

4. Answer the following questions about instances when the eye can be deceived in painting for 10 points each:

[10] This Dutch artist was famous for his woodcuts including the *Tower of Babel* which contains a strange staircase which also appears in his *Relativity* painting as an endless and multidimensional staircase.

ANSWER: Maurits Cornelis Escher (or M.C. Escher)

[10] Escher created the impossible version of this 3D object for his *Belvedere* print. Another optically confusing object of this type is named for Necker.

ANSWER: cube

[10] This art movement was led by the Hungarian Victor Vasarely. Painting in this style often get the viewer to see optical illusions or vibrations—particularly through black and white patterns.

ANSWER: Op art

5. About one in four West Africans has the trait for this genetic disease. For 10 points each,

[10] What disease is characterized by crescent-shaped erythrocytes instead of regular, biconcave ones?

ANSWER: **Sickle-cell anemia**

[10] Because having the genotype Aa [big A, little a] for sickle-cell anemia is protective against malaria, it is called this condition.

ANSWER: **Heterozygote advantage** (accept words forms)

[10] The mutation that sickle-cell anemia causes the replacement of the glutamic acid codon to this other amino acid codon. This amino acid has an isopropyl side chain.

ANSWER: **Valine**

6. This colony lost around 90% of its population during the so-called Starving Time. For 10 points each:

[10] Name this colony whose legislative body the House of Burgesses was the first elected body of representatives.

ANSWER: Colony of **Virginia**

[10] The Colony of Virginia was the site of this 1676 rebellion against William Berkeley in which high prices on goods and declining tobacco prices caused the Native Americans to be used as scapegoats.

ANSWER: **Bacon's Rebellion**

[10] This Native American chief ordered the 1622 massacres in Virginia that resulted in the deaths of nearly a quarter of the settlers.

ANSWER: Chief **Opechancanough** [O-pa-CHAN-ca-no]

7. This opera includes the aria "Summertime" which is sung by Clara and partially inspired by folk songs. For 10 points each:

[10] Identify this opera set in South Carolina where Robbins is stabbed with a fishing hook in its first act.

ANSWER: **Porgy and Bess**

[10] *Porgy and Bess* was composed by this American composer who is also known for the jazz-influenced *Rhapsody in Blue*.

ANSWER: George **Gershwin**

[10] This Biblically-inspired song in *Porgy and Bess* is sung by the drug dealer Sportin' Life and contains the lyric "Li'l Moses was found in a stream. / He floated on water/ Till Ol' Pharaoh's daughter".

ANSWER: **"It Ain't Necessarily So"**

8. This God had a red beard and was said to have had red eyes which may be why he was considered so frightful in battle. For 10 points each:

[10] Identify that Norse thunder god who wielded the dwarven hammer Mjollnir [pr. "mi-yol-ner"].

ANSWER: **Thor**

[10] At Ragnarök, Thor is to battle this beast who will also kill Thor with its deadly venom. This creature was supposedly so long that it could wrap itself around the Earth and swallow its tail.

ANSWER: **Jörmungandr** (or **"Midgard Serpent"**)

[10] In one myth, Thor tries to catch the Midgard Serpent with the help of this giant. This gracious giant helps Thor by providing him with an enormous cauldron.

ANSWER: **Hymir**

9. Answer some questions about history's most famous highway for 10 points each.

[10] This route was not a single road, but rather a network of roads and shipping routes that connected Ancient and Medieval China with the Middle East and Europe.

ANSWER: **Silk Road**

[10] Trade along the Silk Road continued uninterrupted during this peaceful time. This period of the 13th and 14th centuries survived its empire's breakup into subsidiaries such as the Golden Horde and the Il Khanate, and ended with the proliferation of the black death.

ANSWER: **Pax Mongolica** (prompt on the existence of the Mongol Empire or similar answers)

[10] The Byzantine Emperor Justinian I sent groups of these people along the Silk Road to steal silkworm eggs from China. Two of these people were also the first Europeans to discover how silk is made.

ANSWER: **monks** (accept obvious equivalents such as **Christian priests**)

10. This play's title character is a canteen woman with the Swedish army. For 10 points each:

[10] Identify this play in which Ann Fierling loses all three of her children including Swiss Cheese during the 30 Years War.

ANSWER: **Mother Courage and Her Children** (or **Mutter Courage und ihre Kinder**)

[10] *Mother Courage* was written by this pioneer of "epic theater" who also wrote *The Threepenny Opera* which Kurt Weill set to music.

ANSWER: Bertolt **Brecht**

[10] This other Brecht play, Grusha is left with the child of a wealthy couple and leaves town after seeing the Governor's head nailed to the church. Later, Azdak decides to use the same method used by Solomon in the Bible to verify the baby's maternity.

ANSWER: **The Caucasian Chalk Circle** (or **Der Kaukasische Kreidekreis**)

11. Answer some questions about the greatest King of Ancient Egypt for 10 points each.

[10] This pharaoh ruled during the 13th century BC at what is widely considered Egypt's high point. He signed one of history's first peace treaties with the Hittites.

ANSWER: **Ramesses II**

[10] Ramesses II was a member of the 19th Dynasty, part of this period of Egyptian History. This period is contrasted with the "middle" and "old" kingdoms

ANSWER: **New Kingdom**

[10] After the disintegration of the New Kingdom, this kingdom emerged in Nubia in modern day Sudan. This kingdom later conquered Egypt and formed the 25th dynasty.

ANSWER: Kingdom of **Kush**

12. This fictitious force is felt when riding on a merry-go-round. For 10 points each:

[10] Identify this force that is felt by objects in a rotating reference frame that makes it seem that there is an outward force on the object.

ANSWER: **Centrifugal** Force

[10] The Centrifugal Force is just a consequence of this physical phenomenon whose reference frames are mentioned in Newton's first law.

ANSWER: **Inertia**

[10] Contrary to the centrifugal force, the centripetal force does exist. When an object is moving in this fashion, it's centripetal force is $m \times \omega^2 \times r$ and all these quantities are expressed as vectors.

ANSWER: **Non-uniform** circular motion

13. This author created Nina who owns a plantation ran by her slave Harry. For 10 points each:

[10] Identify this regionalist author of *Dred: A Tale of the Great Dismal Swamp*, whose title character in another novel ends up on the plantation of the cruel slave owner Simon Legree.

ANSWER: Harriet Beecher **Stowe** (prompt on Beecher")

[10] Stowe's *Uncle Tom's Cabin* was widely read before this American conflict. Abe Lincoln referred to Stowe as "the little woman who started" this war.

ANSWER: American **Civil War**

[10] This author's 2005 novel *The March* describes Sherman's destructive march to the sea through the eyes of several characters. This author also used the historical backdrop of early 20th century New York in conjunction with the Mother and the tragic black musician Coalhouse Walker in *Ragtime*.

ANSWER: Edgar Lawrence **Doctorow**

14. These lengthy religious compositions often include sections like "Agnus Dei," and "Kyrie", For 10 points each:

[10] Name these liturgical masses for the dead. Famous examples of which include one by Verdi, and a "German" one by Brahms.

ANSWER: **requiem** mass

[10] This composer's requiem mass was left unfinished at the time of his death. This Austrian composer also composed such works such as the "Jupiter" Symphony, and his "Eine Kleine Nacht Musik."

ANSWER: Wolfgang Amadeus **Mozart**

[10] In Verdi's requiem mass, this is the name of the famously terrifying second section. In Mozart's requiem this section takes place at the beginning of the "Sequentia".

ANSWER: **Dies Irae**

15. This text affirms the speaker's belief in God and in Jesus Christ, Son of God. For 10 points each,

[10] Identify this text, like the Apostles Creed, that was originally composed at its namesake ecumenical council in 325 AD.

ANSWER: **Nicene** Creed

[10] The Nicene Creed was composed as a rebuttal to this heresy, which held that Jesus is distinct from, and subservient to, the Father.

ANSWER: **Arianism**

[10] In many churches, the Athanasian Creed is recited once a year instead of the Nicene Creed to affirm believe in this concept. This concept states that God consists of three parts: the father, the son, and the holy spirit.

ANSWER: Holy **Trinity**

16. Answer the following about a political campaign that made people feel the burn—both during and after he dropped out for 10 points each.

[10] Bernie Sanders overwhelmingly relied on this type of primary that typically has lower voter turnout which led to some surprising victories. Party officials choose a candidate to support during these local meetings.

ANSWER: **Caucuses**

[10] Bernie Sanders was defeated by this former Secretary of State who was the first female candidate of either major political party.

ANSWER: **Hillary Clinton** (prompt on Clinton)

[10] Bernie Sanders called out this former DNC Chairwoman for her conduct in the Nevada delegate allocation process. Bernie endorsed her 2016 opposition for the 23rd district of Florida, Tim Canova.

ANSWER: Debbie **Wasserman Schultz**

17. According to legend, this leader blinded the architect of St. Basil's Cathedral. For 10 points each:

[10] Name this frightening leader who had Boris Godunov in his court. This leader killed his son of the same name.

ANSWER: **Ivan** the **Terrible** (or **Ivan IV** Vasilyevich or **Ivan the Fearsome** or **Ivan Grozny**, prompt on Ivan)

[10] Under Ivan the Terrible, the Zemsky Sobor tried to get rid of this organization in 1566. This state police organization was used to enforce Ivan's reign of terror throughout Russia.

ANSWER: **Oprichnina** (also accept **Oprichniki**)

[10] Ivan's Oprichniki organized a brutal sacking of this city in 1570. This city on the Valkov river, was the brutalized by Ivan for joining Poland-Lithuania. This city also names a 12th century Republic and was a member of the Hanseatic League.

ANSWER: Velicky **Novgorod**

18. Answers some questions about the inner and perhaps more interesting parts of the Earth for 10 points each:

[10] Near this boundary, seismic waves accelerate, a property used by its namesake to find the crustal thickness at different points on Earth.

ANSWER: **Mohorovičić** discontinuity (accept just **Moho**)

[10] The Moho separates the crust from this layer of the Earth whose upper part is called the asthenosphere and behaves like a viscous fluid.

ANSWER: **mantle**

[10] Gutenberg discontinuity occurs between the mantle and this part of the Earth. The "ringing normals" from earthquakes help geologists study this part of the Earth.

ANSWER: **core** (also accept **outer core**)

19. This essay suggests that readers "use all that is called Fortune." For 10 points each:

[10] Identify this individualistic essay which contains its authors famous quotation "Envy ignorance, Imitation is Suicide".

ANSWER: **"Self Reliance"**

[10] "Self Reliance" was an essay by Ralph Waldo Emerson who was a philosopher of this American philosophical movement that also encapsulated the ideas of Henry David Thoreau.

ANSWER: **transcendentalism**

[10] Thoreau decided to live in the backwoods of Massachusetts so he wrote this book in which Thoreau praises classical learning and advocates teetotalism.

ANSWER: **Walden**; or, *Life in the Woods*

20. This 1847 satirical novel is framed as a puppet show. For 10 points each,

[10] Name this "novel without a hero" that follows Becky Sharp and her marriage to Rawdon through Victorian England.

ANSWER: **Vanity Fair**

[10] This British author of *The Book of Snobs* and *The History of Henry Esmond* wrote *Vanity Fair*

ANSWER: William Makepeace **Thackeray**

[10] This other main character of *Vanity Fair* serves as a foil for Becky Sharp and marries George Osborne after her father tells her not to. George dies at Waterloo so she is forced to give up her child.

ANSWER: **Amelia** **"Emmy"** **Sedley** (accept any underlined part)

21 (TB). Hybridization of nucleic acids forms this structure. For 10 points each:

[10] Name this model of the structure of DNA was proposed by James Watson and Francis Crick.

ANSWER: **Double helix**

[10] The double helix is composed of these basic units that are fused to a phosphate and deoxyribose, including adenine, thymine, cytosine, and guanine.

ANSWER: **Nitrogenous bases**

[10] This type of nitrogenous base consists of a five and six-membered ring. Its members are adenine and guanine.

ANSWER: **Purines**