

Packet of Michigan, Michigan State Students

Packet 14

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Tossups

1. Leonard Howell wrote a text important in this religion entitled *The Promise Key*. Members of this religion often belong to denominations known as mansions and follow a dietary practice called I-tal. Members of this religion see Western culture as a representation of Babylon, and refer to God as (*) “Jah.” Haile Selassie is revered in this religion as a reincarnation of Christ, and members of this religion advocate a return to Africa and the spiritual use of cannabis. For 10 points, name this Afrocentrist religious movement popular in Jamaica.

ANSWER: Rastafari

2. The earliest inhabitants of this land arrived on outrigger canoes from Borneo and brought lowland padi fields, who mixed with migrants from a nearby continent. A species of hippopotamus native to this island was driven to extinction by settlers. The Welsh missionary David Jones was instrumental in transliterating the dominant language of this island into Latin script. A popular form of criminal trial on this island involved ingesting the toxic nuts of the (*) Tangena tree. This practice was accelerated by the Queen Ranavalona I. For 10 points, name this large African island that was proposed as a site for the resettlement of European Jews by Hitler during World War II.

ANSWER: Madagascar

3. While at the duke of the Count of Vanholt, the protagonist of one of this author's plays supposedly sends his spirit to India for some grapes. In another of his plays, Mathias is asked to duel in a forged letter written by another character. A clown is threatened in one of this author's plays to serve (*) Wagner for seven years or have lice tear him to pieces. Machiavelli opens a play by this author in which a character must turn over half his property to pay a tribute to the Turks. In that same play, Abigail pretends to convert to Christianity to smuggle out Barabas' gold. For 10 points, name this Elizabethan playwright of *Doctor Faustus* and *The Jew of Malta*.

ANSWER: Christopher Marlowe

4. Lorentz said that the null effect from this experiment was proportional to the square root of $1 - \frac{v^2}{c^2}$. An anecdote about this experiment said it was formulated based on two swimmers crossing a river at different angles. One device used in this experiment was made of two mirrors, a half-silvered glass plate and a telescope. This 1887 experiment—which was done using a (*) interferometer and was at Case Western Reserve University – attempted to measure the movement of the Earth by quantifying a substance in which light supposedly propagated. For 10 points, identify this experiment where the theory of luminous ether was disproven.

ANSWER: Michelson-Morley experiment

5. This language contains a character that is neither a vowel nor a consonant and resembles the English “n”. An old form of this language had a dual number person, but now only has three persons as in English. This language is part of the same group as Rusyn and a 1755 grammar book about this fusional language combined the liturgical version with the spoken version to make high and low styles. This language does not have a difference between long and short vowels, contains (*) no articles, and is the largest Slavic language. For 10 points, identify this language spoken in St. Petersburg.

ANSWER: Russian language

6. A male character of this family locks another character in a closet before planning his wedding right before he is arrested. A member of this family notice a monk’s corpse does not smell as nice as he had expected. A poem about a Spanish inquisitor (*) imprisoning Jesus is created by a member of this family. One member of this family helps Grushenka regain faith. One character with this surname is a pupil of Zosima. The patriarch of this family is murdered by the epileptic Smerdyakov. For 10 points, identify this family of Ivan, Alexei, Dmitri, and Fyodor who are the main characters of a Dostoyevsky novel.

ANSWER: Karamazov Family (accept The Brothers Karamazov or the Karamazov brothers)

7. This monarch crushed the forces of William the Lion which forced him to sign the Treaty of Norham, and this monarch married his daughter Joan to Llywelyn the Great. This monarch’s alliance with Renaud of Boulogne and Otto IV ended after the those two were defeated by forces of Philip Augustus at the Battle of Bouvines. This monarch was excommunicated by (*) Innocent III after not accepting the election of Stephen Langton to Archbishop of Canterbury. Later this monarch signed a document at that expanded the power of the Barons at Runnymede. For 10 points, name this monarch, the brother of King Richard I, that was forced to sign the Magna Carta.

Answer: King John I (accept John Lackland)

8. This artist depicted a woman with a silver garment on her head at the loom in his *Fable of Arachne*. A portrait of Pope Innocent X by this artist was made into several purple versions by another artist. A painting by this man was put into the Hall of Realms and depicted the keys of a city being given by Justinus van (*) Nassau. In his most famous painting, this artist of *The Surrender of Breda* depicted two dwarfs, a dog and the young central figure who wears a white dress. For 10 points, identify this painter who depicted the Infanta Margarita and her maids of honor in his *Las Meninas*.

ANSWER: Diego Velázquez

9. Stainless steel and glass are used in packed columns that are used in a version of this technique while another version works for aliphatic compounds. Another version of this technique utilizes a buffer pushed at a low flow rate and molecules with weights above the exclusion limit exit the column. One version of this technique involves a (*) stationary phase of a thin layer of absorbent like silica gel. This technique is used to separate the analyte from the eluent. The paper version of this technique can be used to determine the colors in a pen using just rubbing alcohol and paper. For 10 points, identify this laboratory technique that separates a mixture named after the Greek word for color.

ANSWER: Chromatography (accept specific types such as paper chromatography)

10. 1 over V times partial V partial T is equal to the thermal expansion coefficient, which is given by this letter. In economics, the exponent in the Cobb-Douglass production function is often given by this letter, while this letter, which is not p, often represents the significance level in statistics. In the standard IPA alphabet, a letter derived from this letter represents the open back unrounded (*) vowel as in the English word “hot”. The type of decay named after this letter involves the atomic number going down by 2. The strongest and most virile male of a group may be known as the [this letter] male, while God says He is [this letter] and Omega in Revelation. For 10 points, identify this Greek letter that comes before beta.

ANSWER: alpha

11. A character in this film dies as a crate of oranges is spilled in the middle of a street. This film opens at a wedding, as a Diane Keaton-played character is introduced to the family of the protagonist. A character in this film hides a gun in a restaurant (*) bathroom, and in this film, a Hollywood studio executive refuses to give a part to Johnny Fontane, and as a result, finds a severed horse head in his bed. In this film, a mob boss explains that he will “make him an offer he can’t refuse.” For 10 points, identify this Francis Ford Coppola film about the Corleone crime family.

ANSWER: The Godfather

12. Abu al-Abbas al-Muhajir conducted the Zliten truck bombing in this country, killing over 90 people. Operation “Blood of the Martyrs” was launched by Khalifa Haftar in this country where, in 2013, prime minister Ali Zeidan was kidnapped from the Corinthia Hotel. This country’s city of Sirte is controlled by ISIS. In 2014, this country’s (*) second civil war began after the Islamist General National Congress refused to accept defeat in the congressional elections. This country’s Tobruk government is recognized by the US. For 10 points, name this country where Christopher Stevens died in the 2012 Benghazi Attacks that was led by Muammar Gaddafi.

ANSWER: Libya

13. One member of this organization was known for his “honest graft” were he bluntly said he would practice politics for the benefit of the party and himself even if it meant taking bribes. That man was George Plunkitt. This organization faced a major setback after Jimmy Walker was forced out of mayorship. This organization’s most infamous leader was depicted with a bag of money (*) for his head in a *Harper's Weekly* publication. That leader was nicknamed “Boss” Tweed. For 10 points, name this New York-based political machine that was constantly derided by Thomas Nast.

ANSWER: Tammany Society/ Hall

14. The frivolous Mrs. Burns-Cooper describes her daughter-in-law’s Stradivarius to a maid in a novel partly set in this American city. Another character born in this city is raised by his half-blind mother and assists the thief Joe Gorman which bothers Einhorn. The poet of (*) *Maud Martha* published poems in this city’s *Defender* newspaper. Before heading to New York, Saul Bellow’s Augie March travels to this city in which Gwendolyn Brooks set some of her work. A poem that mention this city describes it as “wicked and “laughing”. For 10 points, what “City of Big Shoulders” and “Hog Butcher for the World” titles a poem by Carl Sandberg?

ANSWER: Chicago, Illinois

15. The final theme of the first movement of this work is introduced by offstage trumpets, and is called the “Accende lumen sensibus,” theme. Although this work was originally intended to be four movements long, its composer decided to merge the last three movements into a cantata based upon the ending poems of *Faust*. This work ends with vocalists singing *piano pianissimo* with the instructions “Like a breath.” For this work’s premier, (*) three hundred and fifty students from a music school in Munich were enlisted to serve in this work’s chorus. For 10 points, name this symphony by Gustav Mahler which was nicknamed “Symphony of a Thousand”.
ANSWER: Symphony No. 8 in E-flat major or Mahler’s Eighth Symphony (accept “Symphony of a Thousand” before mention)

16. A phenomenon associated with these objects set an upward bound on their momentum of inertia proportional to big G M over c squared. One of these interstellar objects is often mistakenly referred to as Vela X. The gravity on of these objects is about 2 to the 11th times higher than the gravity on Earth and they can be more accurate than (*) atomic clocks at telling time. These types of stars, one of which is in the center of the Crab Nebula, have regular rotational periods which causes emission of a particle in a set interval is why they are sometimes known as lighthouses. For 10 points, identify these magnetized neutron stars that emit electromagnetic radiation.
ANSWER: Pulsars (prompt on neutron stars before mention)

17. A German anarchist named Oskar is killed in this novel while demonstrating during the 1919 German Revolution and is friends with the protagonist’s doctor grandfather. The protagonist of this novel suffers from amnesia after a spittoon injury until he goes to the jungle of Sundarban. In this novel, Mary (*) swaps the nametags of newborn babies including one who will grow to have strong knees. A sensitive nose is possessed by the telepathic protagonist of this novel, Saleem Sinai. For 10 points, identify this novel about a child born on the day of India’s Independence that was written by Salman Rushdie.
ANSWER: Midnight’s Children

18. One group of organisms from this phylum uses a rasping apparatus called Aristotle’s lantern to scrape algae from surfaces. Outbreaks of this phylum’s *Acanthaster planci* have been responsible for devouring coral reefs by everting its stomach. The unique system of this phylum used for respiration, circulation and other functions is permeable to water by the madreporite. The (*) endoskeletons of animals from this phylum is composed of ossicles and made of metal carbonates. Locomotion is achieved by tube feet by members of this phylum that can exhibit radial symmetry. For 10 points, name this phylum of spiny organisms, which includes sea urchins and sea stars.
ANSWER: Echinoderms or Echinodermata

19. One of the members of the Welsh Triad, Rhydderch Hael, “the Generous” owned a weapon of this type known as *Dyrnwyn*. Another weapon of this type was the first weapon ever created per the *Mahabharata* and was used by Shiva against the Danavas. In Shinto myth, Ninigi receives a weapon of this type named (*) Kusanagi from Amaterasu. One legend says that a weapon of this type broke the first weapon of this type that was wielded by King Pellinore. A flaming version of this weapon is used by the giant Sutr in Norse mythology. For 10 points, identify this weapon—one example of which was pulled out of a stone and named Excalibur.
ANSWER: Sword (accept Blade or logical equivalents)

20. This event outlined a prohibition on self-castration and declared that the teachings of Paul of Samosata were heretical. The suppression of the Meletian schism occurred at this event, which also saw Saint Nicholas punch one man from Alexandria in the face after a disagreement. After breaking the reliance on Jewish informants about the month of (*) Nisan, this council agreed to start its own way of deciding when Easter would be celebrated. This council decided that the Son and Father were co-eternal and of the same nature. For 10 points name this first Ecumenical council held by Constantine the Great that created a namesake creed.

ANSWER: First Council of Nicaea (prompt on Council of Nicaea until First is read) NE

21. (TB). One character in this novel confesses to a murder in order to gain salvation after being found with a picture of the killed person's mother in her pocket. In the beginning of this novel, a dog sled headed by a man who graduated from Ingolstadt is found by a crew under Henry Walton in the Arctic. Henry Clerval is murdered in this novel after the protagonist will not build another character a mate. People who haven't read this book frequently confuse the monster with the title character who created him. For 10 points, name this novel by Mary Shelley about a scientist who attempts to recreate life.

ANSWER: Frankenstein; or, *The Modern Prometheus*

22. (TB). Organisms of this species genetically engineered to overproduce amyloid beta and tau proteins exhibit symptoms similar to degenerative diseases in humans. Polytene chromosomes of this organism are often removed before development of the salivary glands. Homeotic gene mutations can cause legs to grow out of its head. This model organism used in genetic studies for its high fecundity, few pairs of chromosomes, and short generation time. The wings of this organism can come in vestigial or apterous forms. The wild type of this organism have red eyes, while mutants have white eyes. For 10 points, name this common insect studied by Thomas H. Morgan.

ANSWER: Fruit Fly or D. Melanogaster or Drosophila melanogaster

Bonuses

1. Answer some questions about a beloved Athenian statesman for 10 points each.

[10] This Athenian politician and general led Athens for over 30 years between the Persian and Second Peloponnesian wars. This man eventually died in the Plague of Athens.

ANSWER: **Pericles**

[10] This treaty between Athens and Sparta was signed under Pericles. Under this treaty, Athens agreed to give up most of its holdings on mainland Greece. Despite its name, this treaty ended up lasting for only fifteen years.

ANSWER: **Thirty Years' Peace**

[10] Pericles led the democratic faction of Athens, while this political rival led the aristocratic faction. In 461 BC, this man was ostracized by Pericles, removing the greatest threat to Pericles' political dominance.

ANSWER: **Cimon** (or **Kimón**)

2. These geometric figures have an orthocenter which is the intersection of three altitudes. For 10 points each:

[10] Identify that shape whose interior angles add up to 180 degrees.

ANSWER: **Triangle** (accept **3-gon**, complete **3-graph**)

[10] In this triangle, named for a French polymath, the binomial coefficients can be seen. The edges of this triangle are all the number 1.

ANSWER: **Pascal's Triangle**

[10] If a triangle is inscribed in a circle, the radius of the circle is the area of a smaller triangle with the center of the circle as a vertex divided by this quantity. This quantity also appears in Heron's Formula for the area of a triangle.

ANSWER: **Semiperimeter** (do not prompt on perimeter)

3. This man was converted to Catholicism by his wife Clotilde. For 10 points each:

[10] Name this Frankish King, the first to unite the Frankish Tribes, who won the Battle of Vouille, which saw the death of the Visigoth king Alaric II.

ANSWER: **Clovis I**

[10] Clovis created this law code which was the first codification of Frankish laws. This ancient law code is best known for excluding women from inheriting the throne.

ANSWER: **Salic Law**

[10] Clovis' remains were moved to a church named after this Saint, the first bishop of Paris, who supposedly preached without a head after being killed by the Romans under Decius.

ANSWER: Saint **Denis**

4. Answer the following about rock albums released in 2016 for 10 points each:

[10] This band, fronted by Myles Kennedy and with Mark Tremonti on lead guitar, released *The Last Hero* in late 2016. This band's songs "My Champion" and "Show Me a Leader" have both gotten big radio play.

ANSWER: **Alter Bridge**

[10] This band, more famous for its 1980s albums such as *Master of Puppets*, released *Hardwired... To Self Destruct* which included the track "Moth into Flame" and the Grammy-nominated "Hardwired".

ANSWER: **Metallica**

[10] *A Moon Shaped Pool* is the latest released of this band of *OK Computer*. This band said "I wish I was special/ But I'm a creep, I'm a weirdo" in a song off *Pablo Honey*.

ANSWER: **Radiohead**

5. In one novel, this first American winner of the Nobel Prize in Literature wrote about George and Myra living in the Midwestern town of Zenith. For 10 points each:

[10] Name this author of such novels as *Babbitt* and *Elmer Gantry*.

ANSWER: Sinclair **Lewis**

[10] This novel by Lewis tells of how Carol Milford married Dr. Will Kennicott, Although Carol finds Gopher Prairie dull and leaves after a fight with her husband, she eventually returns to it..

ANSWER: **Main Street**

[10] This other Lewis novel presents an America where fascist candidate Berzelius “Buzz” Windrip defeats FDR in the presidential election and proceeds to take complete control of the nation.

ANSWER: **It Can’t Happen Here**

6. The Kitsap peninsula juts out into this body of water, and this body of water connects to the Pacific Ocean via the Strait of Juan de Fuca. For 10 points each:

[10] Name this body of water; cities such as Seattle and Olympia lie on its shores.

ANSWER: **Puget Sound**

[10] Puget Sound is in this northwestern state, the home of Mount St. Helens.

ANSWER: **Washington**

[10] This other Washington city, the second largest on Puget Sound, was named after the nearby Mount Rainier.

ANSWER: **Tacoma**

7. The stability of alpha helices is usually attributed to these strong intermolecular forces. For 10 points each:

[10] What interactions are responsible for the high specific heat and boiling point of water?

ANSWER: **H**ydrogen bonds

[10] Alpha helices along with beta-pleated sheets belong to this numerical protein structure. This structure is generally the geometric shape that is formed from the H bonding of the different amide groups.

ANSWER: **Secondary** Structure

[10] When this amino acid is in a peptide bond, it lacks the ability to Hydrogen bond. Its presence in alpha helices can cause kinks.

ANSWER: **Proline**

8. California seems like a pretty dry place, so answer some questions about their water problems for 10 points each:

[10] The California Water Wars started after this city’s mayor Fred Eaton had William Mulholland build an aqueduct diverting water from the Owens River to this most populated city in California.

ANSWER: **Los Angeles**

[10] From 1986-1991 California suffered a terrible drought that was ended in part by El Niño and the eruption of this country’s Mount Pinatubo.

ANSWER: **Philippines**

[10] This California Lieutenant Governor decided to pull his support for a high-speed rail because he said the money should be going to water issues. This Democrat is running for California’s governor in 2018, and helped push for same sex marriage in San Francisco as mayor.

ANSWER: Gavin **Newsom**

9. In a painting currently showing in the museum that bears his name, this artist depicted several poor peasants in a dimly lit room in his *The Potato Eaters*.

[10] For 10 points, identify this artist who also painted his physician, Doctor Gachet.

ANSWER: Vincent **Van Gogh**

[10] Van Gogh is probably most notable for this painting that he based off the view from his asylum window. This painting features several swirls in the sky.

ANSWER: **Starry Night**

[10] Views of this city were painted numerous times by Van Gogh including when he stayed here in a bedroom that appears in paintings. Another painting is titled the *Langlois Bridge* of this location.

ANSWER: **Arles** [rhymes with “Carl”]

10. The leader of this group overthrew his father Uranus and is Cronus. For 10 points each:

[10] Identify this group that includes Rhea and Crius who were then overthrown by the Olympians under Zeus.

ANSWER: **Titans** (or **Titanides**)

[10] This supposed personification of the world’s sea was the Titan of Sea. This titan married his sister Tethys and together, the two are the parents of the sea nymphs.

ANSWER: **Oceanus**

[10] This non-titan was known as “The Old Man of the Sea” and also had shapeshifting powers. In *The Odyssey*, Menelaus claimed he was able to capture this god while stranded on his return trip from the Trojan War.

ANSWER: **Proteus**

11. Contrary to Shakespeare, this author’s sonnet consists of an octave and a sestet which is hard to construct in English. For 10 points each:

[10] Identify this humanist Italian poet who wrote several poems about his unrequited love.

ANSWER: **Petrarch** (or Francesco **Petrarca**)

[10] Petrarch wrote those poems to this woman and says “her fair face would see each swift change pass,” in his 101st Sonnet.

ANSWER: **Laura**

[10] This collection of Petrarch’s contains three hundred and sixty six poems. The speaker praises the beautiful laurel [to] grow so, on the green bank in its 148th sonnet.

ANSWER: *Il* **Canzoniere** (or **Book of Songs**)

12. This force is proportional to the product of the area times mass density times flow velocity squared. For 10 points each:

[10] Identify this force that opposes the motion of airborne object such as airplanes.

ANSWER: **drag**

[10] This type of drag occurs when the object moves through a fluid medium. This form of drag can be reduced by streamlining and is the sum of all drag forces not associated with the lift.

ANSWER: **parasitic** drag

[10] This physicist created an equation that describes the drag on spherical objects with low Reynolds numbers. He also names a set of equations that describe the velocity, pressure, temperature and density of a moving fluid with Navier.

ANSWER: George Gabriel **Stokes**

13. The *Apocrypha* records that this man hid the Ark of the Covenant inside a cave on Mount Sinai. For 10 points each:

[10] Name this man, known as the Weeping Prophet, who went to Egypt after the fall of Jerusalem.

ANSWER: **Jeremiah**

[10] This man was the scribe of Jeremiah and compiled the prophet's sayings into two editions of the Book of Jeremiah.

ANSWER: **Baruch** ben Neriah

[10] Jeremiah counseled this last king of Judah, who often did not heed Jeremiah's advice. After Jerusalem fell, this man lost his eyesight and his sons to the Babylonians.

ANSWER: **Zedekiah** (accept **Tzidkiyahu**)

14. The US has a long history of overthrowing democratically-elected leaders. Answer some questions about one of those instances for 10 points each.

[10] In 1953, the US and the United Kingdom orchestrated a coup in this country after the Prime Minister of this country nationalized its oil reserves and forced Western countries out of the oil refining city of Abadan.

ANSWER: **Iran** (or **Persia**)

[10] In the United Kingdom, this coup--named after a mythological hero by the Americans-- was called "Operation Boot". This operation toppled the democratic regime of Mohammad Mossadeq.

ANSWER: Operation TP**AJAX**

[10] The main target of nationalization was this British oil company who in 1933 had negotiated a one-sided deal with the Iranian government. You may give its name at the time or its current name.

ANSWER: **Anglo-Iranian Oil** Company (also accept **British Petroleum**)

15. This Sci-fi short story collection begins in the year 1999 with the start of colonization of Mars. For 10 points each:

[10] Name this collection of short stories that opens with "Rocket Summer" and tells the story of the automated house in "There Will Come Soft Rains".

ANSWER: **The Martian Chronicles**

[10] This novel by the author of *The Martian Chronicles* describes a dystopian world in which "fireman" Guy Montag burns banned books

ANSWER: **Fahrenheit 451**

[10] This author wrote *The Martian Chronicles* and *Fahrenheit 451* as well as *Something Wicked This Way Comes*.

ANSWER: Ray **Bradbury**

16. For 10 points, answer the following about a philosopher known for his plethora of pseudonyms.

[10] Identify this Danish author of *Either/Or* who attempted to increase the fervor of the Christian faith in Europe while critiquing the German idealists like Hegel. This author wrote about the anxiety that one does know if they are going to be eternally saved or damned.

ANSWER: Søren **Kierkegaard**

[10] Kierkegaard repeatedly thought about Abraham's attempt to sacrifice this son of his because God told Abraham to.

ANSWER: **Isaac**

[10] The Binding of Isaac is discussed in this Kierkegaard work in which Kierkegaard argues for a "teleological suspension of the ethical."

ANSWER: **Fear and Trembling**

17. For 10 points each, answer some questions about cynical and cunning Shakespearean villains.

[10] In this play, the power-hungry Iago tries to convince the title character that his wife Desdemona is having an affair with the lieutenant Michael Cassio. Desdemona is later suffocated and both Iago and the title Moor go to prison.

ANSWER: Othello

[10] This tyrannical king from a history play is responsible for the murder of Henry VI per Shakespeare and says “Now is the winter of our discontent/ Made glorious summer by this son of York” to celebrate the ascension of his brother Edward IV.

ANSWER: Richard III (prompt on Richard)

[10] The autocratic leader of Vienna, Lord Angelo is the antagonist of this Shakespeare play and offers the chaste Isabella the chance to free her brother Claudio from execution if she will sleep him. Thankfully, Claudio is pardoned at this play’s end by the Duke.

ANSWER: Measure for Measure

18. *Note to Reader: Do not reveal alternative answers to the first part, as they reveal the answer to the second.*

In contrast with aristocratic composers such as Tchaikovsky, this group of composers all came from more austere backgrounds. For 10 points each:

[10] Name this group of nineteenth century composers who strove to create a unique style of classical music for their homeland. Its members included Mily Balakirev and Modest Mussorgsky.

ANSWER: The Mighty Handful or The Five or the New Russian School

[10] The Mighty Handful were all composers from this country, other composers from this nation included Peter Ilyich Tchaikovsky.

ANSWER: Russia (do NOT accept or prompt on “Soviet Union” or “USSR”)

[10] This other member of the Mighty Handful served in the Russian navy before composing such works as *Scheherazade*, *Capriccio Espagnol*, and his *Russian Easter Festival Overture*.

ANSWER: Nikolai Rimsky-Korsakov

19. For 10 points each, answer the following about Hippies and the anti-war movement of the 1960s.

[10] Hippies constantly called this segregationist a Nazi during his 1968 presidential campaign which led him to reply “I was killing fascists when you punks were in diapers.”

ANSWER: George Wallace

[10] Hippies had their heyday at this event in New York State where they performers like Jimi Hendrix who performed a distorted version of the National Anthem.

ANSWER: Woodstock festival

[10] Many hippies and anti-war protestors got pummeled by union workers during this event during the mayorship of John Lindsay. This event came as a result of protests against recent actions at Kent State.

ANSWER: Hard Hat riot

20. Common examples of compounds with these chemical structures include snow, sucrose, and table salt. For 10 points each:

[10] Name these solid structures that are composed of repeating unit cells in a geometric pattern. Pure metals and binary salts usually form these structures.

ANSWER: crystals

[10] The cubic crystal system, where the sides of a crystal's unit cell are all equal lengths, can occur in primitive, body-centered, or this geometry. This is the densest geometry for a cubic unit cell and has six half lattice points.

ANSWER: face-centered (accept cubic close-packed; do not accept body-centered)

[10] The plane denoted by this system as [111] [pr. "one one one"] for a face-centered cubic unit cell forms a hexagonal grid. Name this notation system used in X-ray crystallography consisting of vectors h , k , and l that is used to describe planes of reference in Bravais lattices.

ANSWER: Miller index

21 (TB). Answer the following about contemporary American art for 10 points each:

[10] Identify this postmodern artist who made numerous balloon dog sculptures and a sculpture in which Jayne Mansfield holds the cartoon Pink Panther.

ANSWER: Jeff Koons

[10] Koon created a gold sculpture of this pop icon and his pet monkey Bubbles as part of his *Banality* series.

ANSWER Michael Jackson

[10] New York-born Jean-Michel Basquiat is most notable for his work in this artistic genre that is often done using spray paint on the side of buildings.

ANSWER: graffiti