



2018 MVS RAMS

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Packet 02

1. **Planck's constant divided by this quantity is the de Broglie wavelength, and this quantity divided by twice an object's mass equals kinetic energy. According to the Heisenberg Uncertainty Principle, this quantity and (*) position cannot both be known at the same time. The change in this quantity, whose derivative is force, is called impulse. For ten points, name this product of mass and velocity that is symbolized "p."**
ANSWER: (linear) **momentum** [DO NOT accept or prompt on "angular momentum"]

This character once managed the Pencey Prep fencing team, but lost that job when he left the team's equipment on the New York subway. For 10 points each:

[10] Name this character, who mourns his dead brother Allie and calls his other brother D.B. a "phony" after D.B. becomes a screenwriter in Hollywood.

ANSWER: **Holden Caulfield** [accept either underlined name]

[10] Holden Caulfield is the narrator of this novel.

ANSWER: The **Catcher in the Rye**

[10] This reclusive American author wrote *The Catcher in the Rye*. He wrote about Seymour Glass in his short story "A Perfect Day for Bananafish."

ANSWER: J. D. **Salinger** [or Jerome David **Salinger**]

2. **A section in this work describes a duel with a Basque ["Bask"] wielding a pillow, a battle supposedly partially described in the notebooks of an Arab. This novel's title character loves Dulcinea [Dul-sin-ay-ah] and is dubbed the Knight of the Sorrowful Countenance. This novel also features the horse (*) Rocinante and the squire Sancho Panza. This novel's title character, who comes from La Mancha, tilts at windmills believing they are giants. For 10 points, name this novel by Miguel de Cervantes.**
ANSWER: **Don Quixote** [or *The Ingenious Gentleman Don Quixote of La Mancha*; or *El Ingenioso Hidalgo Don Quijote de la Mancha*]

This monarch put down Pugachev's Rebellion, and her lover Grigory Orlov helped orchestrate a coup to overthrow her husband, Peter III. For 10 points each:

[10] Name this empress of Russia known as "the Great."

ANSWER: **Catherine** the Great [or **Catherine** II; or **Yekaterina** Velikaya; or **Yekaterina** Alekseevna; or Princess **Sophie** of Anhalt-Zerbst]

[10] This other favorite of Catherine's was vital in her annexation and rule over the Crimea, although the empress later accused him of building namesake fake villages there to make the region appear more prosperous.

ANSWER: Grigory **Potemkin** [or **Potemkin** villages]

[10] Catherine also installed Stanislaw Poniatowski as king of this country governed from Warsaw, which at the time was in a commonwealth with Lithuania. Russia, along with Prussia and Austria, later partitioned this country.

ANSWER: **Poland** [or **Polska**; or **Poland**-Lithuania; or **Polish-Lithuanian Commonwealth**]

3. **This author criticized Euripedes for the "downfall" of Greek tragedy in one work that was later edited to include this author's essay "An Attempt at Self-Criticism." This author included chapters called "Why I Am a Destiny" and "Why I Write Such Good Books" in his (*) *Ecce Homo*. His praise of a "blond beast" in *On the Genealogy of Morals* and his concept of the Ubermensch made him a darling of the Nazi movement. For 10 points, name this German philosopher who declared "God is dead" in *Thus Spoke Zarathustra*.**

ANSWER: Friedrich **Nietzsche**

This deity traveled to the underworld to retrieve his wife Izanami, but found he could not because she had eaten food there. For 10 points each:

[10] Name this Japanese deity who also formed the storm god Susanoo from his nose and Amaterasu from his left eye.

ANSWER: **Izanagi**

[10] Izanagi and Izanami performed this action by stirring the primordial ocean with a jeweled spear. In Greek myth, this occurred when Gaia emerged from a cosmic void.

ANSWER: **creation** of the world [or **creation** of land; or word forms; do not accept or prompt on "creation of humans"]

[10] The story of Izanami being trapped in the underworld due to eating food is similar to the story of this Greek goddess, a daughter of Demeter abducted by Hades and kept in the underworld due to eating pomegranate seeds.

ANSWER: **Persephone**

4. After this empire was [emphasize] *defeated* at Cannae, the *Lux Oppia* was passed, which forbade women to own more than a half-ounce of gold. This empire's women wore a garment called a *stola*. Hortensia successfully argued against a tax on the wealthiest women in this empire; that tax would have funded a war against (*) Cassius and Brutus, who assassinated a ruler of this empire. For 10 points, name this empire centered on an Italian city.

ANSWER: **Rome** [or the **Roman** Empire]

This branch of mathematics makes use of such concepts as the “product rule” and the “chain rule.” For 10 points each:

[10] Name this branch of mathematics where students may take the “derivative” of a function. This branch of mathematics is closely tied to classical physics.

ANSWER: **calculus**

[10] Today, calculus is considered to have been co-discovered by Gottfried Leibniz and this other man, who also developed three namesake laws of motion.

ANSWER: Sir Isaac **Newton**

[10] Another fundamental operation in calculus is the “integral,” which calculates this quantity under the curve on a graph. This quantity can be calculated for a rectangle by multiplying length times width.

ANSWER: **area**

5. In one particularly violent ballad featuring this character, he beheads Guy of Gisborne, who has been hired to kill him. Plays about this man were associated with May Games celebrations in England, and those plays provide the first recorded appearances of this man's sidekicks Maid (*) Marian and Friar Tuck. This character's “Merry Men” also include Little John. For 10 points, name this English outlaw of Sherwood Forest who “robs from the rich to give to the poor.”

ANSWER: **Robin Hood** [accept either underlined name]

This company's first product was displayed to the public at the Homebrew Computer Club. For 10 points each:

[10] Name this company which manufactured the Lisa and the Macintosh personal computers during the 1980s before co-founder Steve Jobs was temporarily forced out of the company. It was recently valued at 1 trillion dollars.

ANSWER: Apple Computer [or Apple, Inc.; or AAPL]

[10] This other co-founder of Apple personally designed and built the Apple I [one] that was displayed at the Homebrew Computer Club. He also holds the patent as sole inventor of the Apple II [two], the company's first consumer PC.

ANSWER: Steve Wozniak [or Stephen Gary Wozniak, prompt on "Woz"]

[10] Apple has been involved in several intellectual property lawsuits with this Korean company, whose Galaxy smartphone and tablet line competes with Apple's iPhone and iPad.

ANSWER: Samsung

6. **This organ is affected by Meniere's disease, symptoms of which include extreme dizziness. The visible part of this organ is called the auricle or pinna. This structure contains the Organ of Corti, which contains (*) hair cells and is part of the cochlea. This organ contains three ossicles nicknamed the hammer, anvil, and stirrup. For 10 points, name these sensory organs used for hearing.**

ANSWER: ears [or inner ear before "visible" is read; or cochlea before "visible" is read]

Charles de Gaulle once jokingly asked "How can you govern a country which has 246 varieties of" this foodstuff. For 10 points each:

[10] Name this food whose Brie and Roquefort varieties are widely produced in France.

ANSWER: cheese

[10] This region in the north of France is known for producing Camembert and Boursin cheeses. It also contains the island of Mont-St.-Michel.

ANSWER: Normandy

[10] This other French export may be made from grapes of the Chardonnay or Cabernet Sauvignon varieties. French regions associated with this product include Bordeaux and Champagne.

ANSWER: wine [prompt on alcohol]

7. **This artist satirized his mainstream success in the single “My Band,” released with his group D12. This man mocked Michael Jackson in his video for “Just Lose It,” and he rapped “I’d rather be 80-year-old me than 20-year-old you” in a 2018 diss track that also ridiculed his adversary’s man bun. This artist starred in the semi-autobiographical film (*) *8 Mile*, for which he recorded the song “Lose Yourself,” and he released “Killshot” during a high-profile feud with Machine Gun Kelly. For 10 points, name this rapper born Marshall Mathers who also goes by “Slim Shady.”**
ANSWER: **Eminem** [or Marshall Bruce **Mathers** III before mention; or Slim **Shady** before mention]

Answer the following about models of the atom for 10 points each.

[10] J.J. Thomson is known for advocating this model of the atom, which is named for a Christmas dessert. This model visualized electrons as being dispersed throughout a “soup” of positive charge.

ANSWER: **plum pudding** model

[10] Thomson was not aware of the existence of this part of the atom, a dense area of positive charge. Niels Bohr’s model of the hydrogen atom envisioned electrons orbiting this part of the atom.

ANSWER: **nucleus**

[10] Today, electrons are described as belonging to one of these structures, which are regions of probability where electrons are likely to be found. These structures are usually classified as *s*, *p*, *d*, and *f*.

ANSWER: atomic **orbitals**

8. **In one part of this work, Nicholas and Alison deceive an old carpenter, John, while in another, a woman tells of a knight who learns that women want power over their husbands. Another part of this work sees the rooster Chanticleer escape from a fox, and in another story, Palamon and Arcite compete over (*) Emily. The stories in this work are told by pilgrims such as the Miller, the Knight, and the Wife of Bath. For 10 points, name this work by Geoffrey Chaucer.**
ANSWER: The **Canterbury Tales**

This poem describes a dice game between Death and Life-in-Death and contains the famous lines “Water, water everywhere / Nor any drop to drink.” For 10 points each:
[10] Name this poem whose frame narrative features an old man seizing a Wedding-Guest to tell his story and ends with the Wedding-Guest “a sadder and a wiser man.”

ANSWER: “The **Rime of the Ancient Mariner**”

[10] “The Rime of the Ancient Mariner” was written by this Romantic poet, who wrote “Kubla Khan” and also collaborated with Wordsworth on *Lyrical Ballads*

ANSWER: Samuel Taylor **Coleridge**

[10] In “The Rime of the Ancient Mariner,” the title sailor’s ship is cursed because he killed this specific bird, which causes the wind to stop blowing. The Ancient Mariner then has to wear this bird’s carcass around his neck.

ANSWER: **albatross**

9. One work by a painter from [emphasize] *this country* depicts the artist as an animal shot with nine arrows, *The Wounded Deer*. That self-portrait from *this country*, along with *The Broken Column*, depicts the chronic pain suffered by an artist from *this country* after a bus accident. Another painter from *this country* controversially depicted Vladimir (*) Lenin in his mural *Man at the Crossroads*. For 10 points, name this home country of Frida Kahlo and Diego Rivera, who both experimented with Aztec iconography in their works.

ANSWER: **Mexico** [or United **Mexican** States; or Estados Unidos **Mexicanos**]

This man’s paper “Experiments in Plant Hybridization” introduced the laws of segregation and independent assortment. For 10 points each:

[10] Name this monk known as the founder of genetics.

ANSWER: Gregor (Johann) **Mendel**

[10] Mendel is best known for working with these types of plants and studying characteristics such as pod shape.

ANSWER: **Pea** plants

[10] Students studying Mendelian genetics often make use of this diagram, a table which predicts the frequency of alleles in offspring based on the parents’ genotypes.

ANSWER: **Punnett square** [prompt on partial answer]

10. **This movement was supported by Neal S. Dow, the mayor of Portland, Maine, as well as by first lady Lucy Hayes, who earned her nickname for support of this movement. Wayne Wheeler drafted a notorious piece of legislation in support of this movement named after Minnesota Senator Andrew (*) Volstead. That act allowed the 18th Amendment to be implemented. Carrie Nation was a notable advocate of, for 10 points, which movement championed by the Anti-Saloon League and repealed by the 21st Amendment?**

ANSWER: **Prohibition** [or **temperance**; or **support** for the **Eighteenth Amendment** before mentioned; or anything equivalent about **banning alcohol**]

J.S. Bach's six solo suites for this instrument were largely unperformed due to their highly technical nature, but Pablo Casals recorded and popularized them in the 1930s. For 10 points each:

[10] Name this string instrument. Its representation of the swan in *The Carnival of the Animals* is another well-known piece in this instrument's repertoire.

ANSWER: **cello** [or **violoncello**]

[10] *The Carnival of the Animals* was written by this French composer. He also wrote *Danse macabre*, which he quoted in the "Fossils" section of the *Carnival*.

ANSWER: Camille **Saint-Saëns**

[10] The "Tortoise" section of the *Carnival* features the music for this high-kicking French dance played agonizingly slowly by the strings section.

ANSWER: **can-can** [accept **Infernal Galop** or **Galop infernal**]

11. **Geologic similarity between these mountains and the Lesser Atlas mountains in North Africa provides evidence for the formation of Pangea. This mountain range contains Mount Katahdin, which marks one end of a trail named for this mountain range. The highest of these mountains is Mount Mitchell in (*) North Carolina, and subranges of this mountain range are the Blue Ridge and the White Mountains. For 10 points, name this mountain range that dominates the Eastern United States, running from Canada to Georgia.**

ANSWER: **Appalachian** Mountains [or **Appalachians**]

This planet is being studied by the Curiosity rover. For 10 points each:

[10] Name this “red planet.”

ANSWER: **Mars**

[10] This Martian volcano is the largest volcano in the Solar System. This mountain is just northwest of the Tharsis Bulge.

ANSWER: **Olympus Mons**

[10] Olympus Mons is this type of volcano. These volcanoes have gently sloping sides due to their formation from low-viscosity lava flows.

ANSWER: **shield** volcano

12. **In this book, one figure trades his birthright for a bowl of lentil stew. That man’s brother deceives his father by covering himself in hairy goatskins in order to obtain a blessing. That same figure loses an all-day wrestling match when his hip is dislocated, after which he is renamed Israel. This book tells the story of (*) Esau and Jacob, who are sons of Isaac. This book also relates the story of Noah’s Ark, and its first chapters describe the creation of the world. For 10 points, name this first book of the Bible.**

ANSWER: **Genesis** [prompt on “Bible” until mentioned]

Answer the following about Richard Nixon’s resignation for 10 points each.

[10] When Nixon resigned in 1974, this man succeeded him as President. This man had become Vice-President after Spiro Agnew’s resignation, making him the first person to serve in both positions without being directly elected.

ANSWER: Gerald **Ford** [or Gerald Rudolph **Ford**; or Leslie Lynch **King**]

[10] Ford issued one of these reprieves to Nixon, clearing him of any crimes he may have committed against the United States. The President is authorized to grant these under Article II, Section 2 of the Constitution.

ANSWER: Presidential **pardon**

[10] Nixon’s political career began to unravel when five men were caught trying to break into this Washington, D.C. hotel and office complex, the site of Democratic National Committee headquarters.

ANSWER: **Watergate** Complex [or **Watergate** Hotel; or **Watergate** Scandal]

13. **Creatures in this phylum have a bilateral body plan, and at some stage in their lives all creatures in this phylum possess a notochord, a dorsal neural tube, and a tail. All (*) vertebrates are part of this phylum, although not all creatures included in this phylum are vertebrates. For 10 points, name this animal phylum that includes humans.**

ANSWER: **Chordata** [or **chordates**]

On this holiday, altars called *ofrendas* are built and decorated with Aztec marigolds. For 10 points each:

[10] Name this Mexican holiday that commemorates and honors the ancestors. It begins on Halloween.

ANSWER: **Day of the Dead** [or **Dia de (los) Muertos**]

[10] On Day of the Dead, representations of these objects called *calaveras* are also placed as offerings. People may also paint their faces to resemble these objects.

ANSWER: **skulls** [prompt on “skeleton”]

[10] Many *calaveras* are made out of this white, edible substance, then decorated with icing and foil.

ANSWER: **sugar** [or **sugar skulls**; accept **alfeñique** or **sucre**]

14. **Minor characters in this novel include Zigzag, who hits the main character in the head with a shovel, and Magnet, who is serving time for stealing animals at the zoo. Portions of this novel are told through flashbacks to 19th-century Latvia and Texas, which reveal that (*) Zero is the great-great-great-grandson of Madame Zeroni and that Kissin’ Kate Barlow has buried her treasure somewhere in Camp Green Lake. Stanley Yelnats is sentenced to hard labor after being accused of stealing shoes in, for 10 points, which young adult novel by Louis Sachar?**

ANSWER: **Holes**

This author of *Uncle Vanya* and *Three Sisters* names a dramatic principle that says if a gun is seen on stage, it must be fired before the end of the play. For 10 points each:

[10] Name this playwright of *The Seagull*.

ANSWER: Anton (Pavlovich) **Chekhov** [accept **Chekhov’s Gun**]

[10] Chekhov is from this country. Alexander Pushkin, another author from this country, wrote about a statue of Peter the Great in *The Bronze Horseman*.

ANSWER: **Russia** [or **Russian Empire**]

[10] This Chekhov play ends with the offstage sounds of axes chopping down the title location after Lopakhin buys Madame Ranevskaya’s estate.

ANSWER: The **Cherry Orchard** [or **Vishnevyi sad**]

15. **In this work, Fritz breaks the title object, which was a gift from Drosselmeyer. This work contains a Spanish dance representing chocolate and an Arabian dance representing coffee, and it also contains a “Waltz of the Snowflakes.” Clara throws her slipper at the (*) Mouse King in this work, allowing the title character to stab him. This ballet also contains the Dance of the Sugar Plum Fairy. For 10 points, name this Tchaikovsky ballet often performed around Christmas time.**

ANSWER: The **Nutcracker** [or **Shchelkunchik**]

This basketball player made headlines off the court when he opened the “I Promise” school in his hometown of Akron, Ohio. For 10 points each:

[10] Name this athlete who has appeared in the last eight consecutive NBA Finals. He led the Cleveland Cavaliers to the NBA championship in 2016.

ANSWER: LeBron (Raymone) **James**, Sr.

[10] During the summer of 2018, James left the Cavaliers and joined this Western Conference team, where he plays alongside Lonzo Ball and Kyle Kuzma.

ANSWER: Los Angeles **Lakers** [prompt on “Los Angeles” or “LA”]

[10] James was recruited to the Lakers by this part-owner of the franchise, who also owns part of the Los Angeles Dodgers. As a celebrated Lakers point guard, this man won five NBA championships in the 1980s.

ANSWER: Magic **Johnson** [or Earvin **Johnson**, Jr.]

16. Some practitioners of this religion carry amulet bags known as *gris-gris* [gree-gree], and this religion venerates the serpent spirit Damballa. This religion’s supreme god is Bondye, who can be reached through (*) *loa* such as Papa Legba and Baron Samedi, who is depicted in top hat and tails. Marie Laveau was a famous practitioner of this religion in New Orleans, and it is also associated with Haiti. For 10 points, name this syncretic religion known for its namesake dolls.

ANSWER: **Voodoo** [or **Vodun**]

The two people in this painting were modeled on the artist’s sister and dentist. For 10 points each:

[10] Name this painting that depicts the Dibble House in Iowa. Its name comes from the distinctive shape of the house’s windows.

ANSWER: **American Gothic**

[10] This Regionalist artist of *Parson Weem’s Fable* painted *American Gothic*.

ANSWER: Grant **Wood**

[10] The male figure in *American Gothic* wears wire-rimmed glasses and clutches one of these farm implements.

ANSWER: **pitchfork**

17. During this battle, Admiral Villeneuve was captured along with his ship, the *Bucentaure* [Boo-sen-taur]. This battle's winning commander chose not to use the word "confides" in a flag message since it was not in the signal book. That message was "England (*) expects that every man will do his duty." This battle's winning commander had his body preserved in a barrel of brandy after he died aboard the HMS *Victory*. For 10 points, name this 1805 naval battle, a victory for Lord Nelson commemorated by a namesake London square.

ANSWER: Battle of **Trafalgar** [or **Trafalgar** Square]

In one of this author's novels, Amina al-Jawad faints in the street and is hit by a car, fracturing her collarbone. For 10 points each:

[10] Name this author of *Palace Walk*, part of his Cairo Trilogy.

ANSWER: Naguib **Mahfouz**

[10] Mahfouz hails from this nation, which is the setting of all three Cairo Trilogy books.

ANSWER: **Egypt**

[10] Gunter Grass, an author from this country, wrote the Danzig Trilogy, which includes *The Tin Drum*. Grass revealed in 2006 that during World War II, he belonged to this nation's Waffen-SS, which was a Nazi organization.

ANSWER: **Germany** [or Nazi **Germany**]

18. In a form of this process used in sewage treatment, a bar screen is used to trap large objects. Lab equipment used for this process might include two objects named for Ernst Buchner [Byook-nur]. A thick-walled sidearm flask is used in the "vacuum" form of this process. In a common form of this process, a (*) cone of namesake paper is fitted to a funnel and used to remove precipitate from a solvent. For 10 points, name this technique of separating solids and liquids.

ANSWER: **filtration** [or **vacuum filtration**; or **filter** paper; or word forms]

Answer the following about the Gaza Strip for 10 points each.

[10] After this 1967 conflict, Israel seized the Gaza Strip and Sinai Peninsula from Egypt, as well as Jordan's West Bank and Syria's Golan Heights. The land gained from this conflict aided Israel in the 1973 Yom Kippur War.

ANSWER: The **Six-Day War** [accept **Milhemet Sheset Ha Yamim**, accept an-**Naksah** or "The **Setback**," accept **June War**, accept **Third Arab-Israeli War**, accept **1967 Arab-Israeli War**]

[10] In 1993, Israel and the Palestine Liberation Organization signed a series of accords named for this city, the capital of Norway. The accords gave Palestinians the right to self-government in Gaza.

ANSWER: **Oslo**

[10] This political party has had de facto control of Gaza since 2007. This party is listed as a terrorist organization by the U.S. and E.U., and rocket attacks ordered by this party contributed to the start of the Gaza War in 2008.

ANSWER: **Hamas** [or **Harakat al-Muqāwamah al-'Islāmiyyah**; or **Islamic Resistance Movement**]

19. **One man from this country, Alfonso de Albuquerque, captured Goa and Malacca and made peace with the Zamorin of Calicut. Another man from this nation rounded the Cape of Good Hope in 1588; that man was Bartolomeu Dias. A ruler from this country's House of Aviz sponsored voyages to the (*) Azores; that man from this country was Henry the Navigator. For 10 points, name this home country of Vasco da Gama, which is governed from Lisbon.**

ANSWER: **Portugal** [or **Portuguese Republic**; or República **Portuguesa**; or **Portuguese Empire**; or Império **Português**]

In a thought experiment named for this man, a namesake demon controls a door between two chambers of gas so only fast particles can switch sides. For 10 points each:

[10] Name this physicist who names a set of four fundamental equations in electromagnetism.

ANSWER: James Clerk **Maxwell** [or **Maxwell's Demon**; or **Maxwell's Equations**]

[10] By only letting fast particles through, Maxwell's Demon causes one chamber of gas to heat up while the other cools down, decreasing this quantity, the measure of disorder in a system.

ANSWER: **entropy** [or **S**]

[10] Because it causes entropy to decrease, Maxwell's Demon violates the Second Law of this branch of physics, which is concerned with heat and temperature.

ANSWER: **thermodynamics** [or Second Law of **Thermodynamics**]

20. In one of this man's works, Jim O'Connor accidentally breaks one of Laura Wingfield's possessions, causing it to become "just like all the other horses." That figurine, a unicorn, is part of the titular *Glass Menagerie*. This man wrote about the family of Big (*) Daddy Pollitt, and he also wrote a play in which Blanche DuBois [Doo-BWAH] delivers the line "I have always depended on the kindness of strangers." For 10 points, name this author of *Cat on a Hot Tin Roof* and *A Streetcar Named Desire*.
ANSWER: Tennessee **Williams** [or Thomas Lanier **Williams**, III]

Due to this king's madness, which may have been caused by porphyria, his son ruled as Prince Regent from 1811 to 1820. For 10 points each:

[10] Name this English king, a member of the House of Hanover who began his reign in 1760.

ANSWER: **George III** [prompt on "George"]

[10] George fought this war against France from 1756-1763, although victory proved costly. As a result of this war, Britain gained Spanish Florida and parts of New France.

ANSWER: **Seven Years' War** [prompt on "French and Indian War"]

[10] One of the greatest catastrophes of George's reign came when he lost this war. This war's final major battle at Yorktown saw George's general Charles Cornwallis surrender his forces to George Washington.

ANSWER: **American Revolution** [or **Revolutionary War**; or American **War for Independence**; or any other clear-knowledge equivalent]