

FACTS

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PACKET 11

Editors 7 (TJ + CSW)

TOSSUPS

1. One ethnic group in this country, the Tasaday, was created as part of a hoax to enrich a corrupt tourism minister. This country has three linguas francas that include Ilocano and Cebuano, and this country's island of Palawan contains its city of Puerto Princesa. A Muslim population in the South of this country is known as the (*) Moros, and this country's capital has a large suburb named for its first president, Manuel Quezon. This country's island of Mindanao is home to both Communist and Islamist insurgent groups. For 10 points, name this country whose capital on the island of Luzon is Manila.

ANSWER: the Philippines

2. An E minor Lento maestoso section opens a chamber piece by this composer whose first three movements are connected. The final movement of a symphony by this composer opens with an accelerando as the strings repeatedly play a half step from B to C. This composer's fourth piano trio is nicknamed for (*) folk tunes called "Dumky". A piece by this man based on the pentatonic scale was inspired by his vacation in Spillville, Iowa. Though this composer of the "American" String Quartet failed to write an opera based on *The Song of Hiawatha*, that poem inspired the second movement of his ninth symphony, which was later adapted into the song "Goin' Home". For 10 points, name this Czech composer of the "New World" Symphony.

ANSWER: Antonin (Leopold) Dvorák

3. The KDEL retention sequence prevents proteins from leaving this structure, which also contains binding immunoglobulin protein. Desmotubules link these organelles through plasmodesmata, and the COPI ["cop 1"] protein targets vesicles moving *into* this organelle. One form of this organelle that releases calcium is found in (*) muscle cells and is known as its "sarcoplasmic" type. One part of this organelle functions in lipid production and metabolism, while the other part is covered with ribosomes and is involved in protein synthesis. For 10 points, name this organelle that comes in "rough" and "smooth" forms and surrounds the nucleus of a cell.

ANSWER: endoplasmic reticulum [or ER]

4. A work by this man that was designed to provide water for horses features three bees perched on a seashell. He's not Michelangelo, but this man created a work depicting David standing on a harp as he prepares his sling. Besides designing the tomb of Pope Alexander VII, this artist showed Cerberus looking on as his master kidnaps the title woman in (*) *The Rape of Proserpina*, and a group of river gods sit around an obelisk in a work located in the Piazza Navona, his *Fountain of the Four Rivers*. In his most famous work, bronze rays of light shine down on an angel holding an arrow, who stands over the title nun lost in a trance. For 10 points, name this Italian sculptor of *The Ecstasy of Saint Teresa*.

ANSWER: Gian Lorenzo Bernini

5. In one of this author's works, a character has an affair with Miss Inger before entering a failed relationship with the soldier Anton Skrebensky; that character later sees the "living fabric of Truth" in the titular object. In another work by this author, Gertrude's first son dies in London, so she begins to romantically pursue her other son, (*) Paul Morel. Apart from *The Rainbow*, this author detailed an affair between the titular gamekeeper and Constance Reid, whose husband is partially paralyzed after his service in World War I. For 10 points, name this English author famous for explicit works such as *Sons and Lovers* and *Lady Chatterley's Lover*.

Answer: David Herbert **Lawrence**

6. The supply of certain materials into these structures is governed by an equation which states that the partial derivative of pressure times conductivity with respect to height is equal to flow rate. That law, named for Lorenzo Richards, concerns the movement of material into these structures through soil, and is a modified form of the (*) Darcy equation. The formation of these structures can be traced to their proximity to the vadose zone, and a type of these structures which causes the net movement of material above ground level is called artesian. These structures may be "recharged" in a process which drives material below the water table. For 10 points, name these layers of permeable rock that store water underground.

ANSWER: **aquifers**

7. Children often sing a hymn to this figure written by Tulsidas, his namesake chalisa. He led an army of his people in the construction of a bridge called the *rama setu*. This god becomes giant and leaps across the ocean in the *Sundara Kanda*, then shrinks to the size of a cat to show a signet ring. Jambavan reminds this son of Vayu of his full powers. With (*) Vali and Sugriva, he leads the *vanaras*. In order to heal Lakshmana, this god carries a mountain filled with herbs. He sets a fortress on fire after Ravana burns his tail in Lanka. For 10 points, name this figure often shown bowing before Rama and Sita, a Hindu monkey god.

ANSWER: **Hanuman**

8. This composer incorporated three branles [bran-NELS], a sarabande, and a galliard in a ballet that marked his transition to serialism. In one work by this composer, a drumroll links the Shrovetide Fair to a section in which two clarinets introduce a stacked C and F-sharp major chord representing the title character. In another work by this composer of *Agon* (*), a series of games are interrupted by the "Procession of the Wise Elder". This man wrote a ballet whose last movement erratically changes meter almost every measure and depicts a virgin ritually dancing herself to death. That ballet opens with a high bassoon solo and caused a riot at its 1913 Paris premiere. For 10 points, name this Russian composer of *Petrushka* and *The Rite of Spring*.

ANSWER: Igor **Stravinsky**

9. The Kovats retention index is used to compare the results of this process, and one equation governing this process multiplies a function of the Peclet number with the flow rate and is named for Alirio Rodrigues; that equation extends another one governing this process, which includes the quantity HETP. The retardation factor of the planar type of this process is the ratio of the distance travelled by the substance to the distance travelled by the (*) solvent front. One form of this technique uses an unreactive gas as the mobile phase, and the paper form of this technique commonly tests the separation of constituents of ink in water based on capillary action. For 10 points, name this process that separates materials based on the speed at which they travel through a medium.

ANSWER: **chromatography** [accept specific types of chromatography, such as gas **chromatography**, paper **chromatography**, and thin layer **chromatography**]

10. This city was located on the site of the older city of Jiankang. During the recapture of this city from Hong Xiuquan, who declared it the capital of Taiping Heavenly Kingdom, its Porcelain Tower was burned down. Nazi Party member John Rabe was credited with saving 200,000 lives from a catastrophe in this city by creating its namesake (*) “Safety Zone”. Before the KMT took Beijing, this city fittingly served as the Republic of China’s capital, since its name translates as “Southern Capital”. In 1938 Japanese troops killed hundreds of thousands of people in this city in what became known as its “rape”. For 10 points, name this Southern Chinese city.
Answer: Nanjing [accept Nanking]

11. The only non-posthumous recipient of the Medal of Honor after this battle was Hershel W. Williams, and the Pima native American Ira Hayes became famous for his actions at this battle. Lieutenant General Holland Smith called the Japanese commander of this battle, Tadamichi Kuribayashi, “one smart bastard” since American casualties outnumbered (*) Japanese here. Mount Suribachi provided the setting for a famous photograph taken at this battle. For 10 points, name this early 1945 battle, the setting of a flag raising photograph by Joe Rosenthal.
Answer: Battle of Iwo Jima

12. During the Jiu valley river strike of 1977, this man had his secret police give strike leaders excessively long X-rays in order to give them cancer. In a show of independence, this man was the only leader in the Warsaw pact who criticized the invasion of Czechoslovakia in 1968. This man succeeded Gheorghe (*) Gheorghiu-Dej in the position of General Secretary and the title of Conducator. This man and his wife were executed on Christmas Day 1989 after an uprising in the city of Timisoara and previously, he had tried to escape Bucharest in a helicopter. For 10 points, name this Communist dictator of Romania.
Answer: Nicolae Ceausescu

13. A novel from this country includes the story of a thief who became useful to the Allies during World War II after stealing documents for them. An author from this country named a certain animal after a sailor from Edgar Allan Poe’s *The Narrative of Arthur Gordon Pym*; that tiger is named Richard Parker. A book from this country includes a bomb remover named Kip and the titular character Almasy. (*) A more famous novel splits women into social tiers, one of which includes older women and those of the title rank. Those titular figures bear children for the wives. For 10 points, name this country whose literature includes *The Life of Pi*, *The English Patient*, and *The Handmaid’s Tale*.
ANSWER: Canada

14. Kato Zakros and Galatas are two of the smaller palaces of this civilization that have been excavated. A writing system *descended* from that of this civilization was deciphered by Michael Ventris. A devastating blow this civilization occurred when the Thera volcano erupted in the 16th century BCE, which contributed to their eventual decline and the occupation by the Mycenaean (*) Greeks. One popular sport of this civilization involved athletes leaping over bulls, depicted in a fresco at Knossos, which also housed a namesake king who sent seven children to the Labyrinth every nine years. For 10 points, name this proto-Greek civilization found on the island of Crete.
Answer: Minoan civilization [accept Cretan civilization before the last word]

15. A philosopher from this country formulated four maxims which constitute the cooperative principle. Another philosopher from this country noted that a statement might have a perlocutionary effect if it is an illocutionary act, which he classified as a speech-act. A thinker from this home country of Paul Grice stated proper names are “disguised” definite descriptions, demonstrated with reference to the (*) “present King of France.” A native of this country published “On Denoting” in the journal *Mind*, which was edited at different times by Gilbert Ryle and G.E. Moore. “Ordinary language” philosophy was promoted here by J.L. Austin. For 10 points, name this country where Bertrand Russell worked at Cambridge University.

ANSWER: United Kingdom of Great Britain and Northern Ireland [accept either underlined portion; accept UK; accept England, but not any other constituent countries of the UK]

16. A high-grade variety of this thing is called A·tash Beh·ram. These things are created and jumped over on Cha·harsh·an·be Su·ri towards the end of Nowruz. A compound made from the ha·o·ma plant is offered at places named for this substance, which is often considered a physical manifestation of *asha*, or truth. Contact between (*) corpses, sacred earth and this other sacred substance are prevented by Towers of Silence. A dragon created by Ahriman was defeated by this personified substance, called *atar*. Like freshwater, it must always be present at temples to Ahura Mazda. For 10 points, name this substance which Zoroastrians fuel with sandalwood.

ANSWER: fire(s) [or atar before mention; accept anything about fire temples or agiaries]

17. One character in this novel supports a dubious story by showing the narrator a medal from his military service in Montenegro. A golfer in this novel has an incurable habit of dishonesty, a trait the narrator finds attractive. After his wife is run over, a garage owner (*) in this novel hunts the title character and eventually shoots him in a pool. That character earlier hosts a party in which he invites much of West Egg, including his love interest, Daisy Buchanan. For 10 points, name this F. Scott Fitzgerald novel narrated by Nick Carraway that details the exploits of his neighbor in West Egg.

ANSWER: *The Great Gatsby*

18. At the end of Mos Def’s song *Brooklyn*, the beat changes to an instrumental of a song by this artist. In a prominent guest verse on the remix of “Flava in Ya Ear”, this rapper remarked “don’t be mad; UPS is hiring,” a diss supposedly aimed at the song’s original artist, Craig Mack. This man adopted a nickname from the protagonist of the film *The King of* (*) *New York*, Frank White. In one of his most famous songs, he claims that his debut album was “dedicated to all the teachers that said I would never amount to nothing.” For 10 points, name this artist of the albums *Ready to Die* and *Life After Death*, who was accused by Tupac of setting up a shooting at Quad Studios in 1994.

ANSWER: Notorious B.I.G [accept Biggie Smalls, Christopher Wallace; accept Frank White before mention]

19. This language was used to write the magnum opus of a writer who adopted pseudonyms called “heteronyms”, which he often used to express radical views. Another novel written in this language is subtitled “Epitaph of a Small Winner”, considering it a victory the fact that the protagonist did not father children who would have to suffer in life. In another novel in this language, a peninsula (*) breaks off from Europe to form the namesake *Stone Raft*. It’s not Greek, but a nobel prize winning author used this language to write *The Gospel According to Jesus Christ* and *Blindness*. Machado de Assis, Fernando Pessoa, and José Saramago write in, for 10 points, what Iberian language spoken in countries such as Brazil.

ANSWER: Portuguese

20. The time evolution of the distribution function of this substance is described by the Vlasov equation, and Birkeland currents are driven by the bulk motion of this substance. One phenomenon in this substance consists of ions oscillating in response to tension on magnetic field lines; those low-frequency oscillations in this substance are called (*) Alfvén waves. This substance is treated as a single fluid in magnetohydrodynamics, and this substance can be confined in the shape of a torus by a tokamak. The interior of the Sun is a fully ionized example of this substance, while lightning storms are only partially ionized. The most abundant form of ordinary matter in the universe is--for 10 points--what highly ionized substance deemed the “fourth state of matter”?

ANSWER: **plasmas**

BONUSES

1. The cartoonist Thomas Nast has often been described as “the most influential artist of the 19th century.” For 10 points each, name some things about the illustrations that he made.

[10] Nast sometimes depicted this man as a human moneybag, and his face was depicted on a vulture’s body in the cartoon “Let us Prey”. Samuel Tilden made a name for himself as a governor of New York by taking on this man.

ANSWER: William Marcy “Boss” **Tweed**

[10] Nast’s cartoons in *Harper’s Weekly* were instrumental in mobilizing public sentiment against this political machine that Boss Tweed led.

Answer: **Tammany Hall** [accept **Sons of Saint Tammany**, **Society of Saint Tammany**, or the **Columbian Order**]

[10] Nast drew a detailed illustration juxtaposing lines from this document with pictures of atrocities against African Americans in the South. This document was written to support a failed presidential campaign by George McClellan and omitted a controversial “peace plank”.

Answer: **1864 Democratic Party platform** [accept the **Chicago Platform**]

2. The newly named element Oganesson lies in the same column as other members of this group, but may not necessarily be a member of it. For 10 points each:

[10] Name this group which contains such elements as iodine, fluorine and chlorine. These elements are very reactive, unlike the noble gases immediately to their right on the periodic table.

ANSWER: **halogens** [or Group **17**]

[10] Lugol’s reagent, which contains the halogen iodine and this element, is used for disinfecting. It can also be used to screen for cervical cancer.

ANSWER: **potassium** [accept **kasium**, prompt on K]

[10] This elusive halogen has a half life of only 8.1 hours, and thus many of its properties, including its color, have been difficult to observe. This element is most commonly synthesized by bombarding Bismuth-209 with alpha particles.

ANSWER: **astatine** [or **At**]

3. Historiography is a millennia old practice. For 10 points, name some stuff about ancient history recorded by old people.

[10] This historian went on a expedition with the Ten Thousand, a group of Greek mercenaries under the command of Cyrus the Younger, and wrote the Hellenica and Cyropaedia.

Answer: **Xenophon**

[10] This author of “The Prince” wrote a series of discourses on the Roman historian Livy, the author of works such as *Ab Urbe Condita*.

ANSWER: Niccolò **Machiavelli**

[10] This work written by Thucydides notably did not include the battle of Notium, at which Lysander destroys the Athenian Navy, due to the author’s presumed death in 410 B.C.

Answer: *The **History of the Peloponnesian War***

4. The first American record in this period to sell over a million records was Sam the Sham & The Pharoahs' "Wooly Bully." For 10 points each,

[10] Name this period, in which a certain country began to dominate the Billboard Charts in the United States.

ANSWER: **British Invasion** [accept clear equivalents]

[10] This band experienced a namesake "mania" following their record breaking appearance on the Ed Sullivan show, though they would stop touring the US after 1966. They released albums like *Revolver* and *Rubber Soul*.

ANSWER: The **Beatles** [accept **Beatlemania**]

[10] An early hit by the Beatles from their album *Please Please Me* referenced this dance, which was named for a song made popular by Chubby Checker.

ANSWER: The **Twist** [accept **Twist and Shout**]

5. This ruler was confronted by the Fronde upon acceding as a child, and was advised by Cardinal Mazarin. For 10 points, name:

[10] This bourbon king of France who fought in the war of the Spanish Succession and was known as "The Sun King" for his absolutism.

Answer: **Louis XIV**

[10] In the Edict of Fontainebleau, Louis XIV repealed this earlier edict passed by Henry IV, himself a former Protestant, that granted French protestants the right to practice their religions.

Answer: Edict of **Nantes**

[10] This mercantilist served as the finance minister for Louis XIV for the first two decades of his reign: despite his best attempts, France became even more bankrupt due to the king's numerous wars. He was succeeded by Louvois.

Answer: Jean Baptiste **Colbert**

6. One of the assumptions of this model is that the mating of the selected species is random. For 10 points each:

[10] Name this doubly-eponymous model in genetics that predicts the spread of dominant and recessive traits within a group. The frequency of a heterozygous genotype is twice the frequency of either trait if this model holds.

ANSWER: **Hardy-Weinberg** principle [accept "equilibrium", "model", "theorem", or "law" in place of "principle"]

[10] The Hardy-Weinberg model assumes that, among other things, the size of this body is near infinite. Its formal definition is the collection of all members of a given species in a given area.

ANSWER: **population** size

[10] A population exhibiting an equal count of organisms of homozygous dominant, homozygous recessive and heterozygous genotypes would have a measure of exactly one for this quantity, which tracks the distribution of traits in a population.

ANSWER: Species **evenness**

7. Answer the following about the Heinemann African Writers Series. For 10 points each:

[10] The series published *Some Monday For Sure* by this author of *Burger's Daughter* and *The Conservationist*.

This author wrote another novel in which the Smales family flees to a rural village with their servant, *July's People*.

ANSWER: Nadine **Gordimer**

[10] The Heinemann Series also published several works by authors including David Diop and Ousmane Sembene who used this language. Leopold Sedar Senghor, a president of Senegal, was elected to the Paris-based Academy that oversees this language's development.

ANSWER: **French**

[10] This Rhodesia-raised author had her *The Grass is Singing* published in the African Writers Series. Her other works include *The Good Terrorist* and *The Golden Notebook*.

ANSWER: Doris **Lessing**

8. The black *Sahabah* Bilal ibn Rabah was selected as the first to regularly perform this duty. For 10 points each:

[10] Name this duty performed by a muezzin, typically from a minaret and nowadays often with the assistance of a loudspeaker, but always while facing the Qibla.

ANSWER: (the) **call to prayer** [or **adhan**; accept reasonable equivalents using **salah** or **salat** in place of “prayer”]

[10] Muezzins call out *adhan* this many times a day since Muslims are supposed to perform *salat* this many times a day. *Salat* is one of this many “pillars” of the Muslim faith.

ANSWER: **five**

[10] During the *Mi'raj*, this figure urged Muhammad to ask Allah to lower the number of required prayers from fifty to five. The Sura al-Baqarah reminds listeners of the time this prophet told his people to slaughter a cow per Allah's will.

ANSWER: **Moses** [or **Musa**; or **Kalimullah**]

9. The central figure in this painting wears a ribbon around her neck and a flower in her hair. For 10 points each:

[10] Name this scandalous painting whose subject reclines nude on a bed as a black servant hands her a bouquet of flowers.

ANSWER: ***Olympia***

[10] This French Impressionist, the painter of *Olympia*, also sparked controversy with his *Luncheon on the Grass*.

ANSWER: Édouard **Manet**

[10] Manet painted multiple portraits of this fellow Impressionist, including one of her with a bouquet of violets. An artist in her own right, she painted works such as *The Cradle* and *On the Balcony*.

ANSWER: Berthe **Morisot**

10. For 10 points each, answer the following about superfluous men in literature:

[10] *Diary of a Superfluous Man* was a novel by this man often credited with developing the archetype. This man also wrote the collection *A Sportsman's Sketches*.

ANSWER: Ivan **Turgenev**

[10] This author of *A Hero of Our Time*, which also employed a superfluous man archetype, accused Turgenev of plagiarising him in *Diary of a Superfluous Man*.

ANSWER: Mikhail **Lermontov**

[10] Turgenev and Lermontov were both from this country, also home to authors such as Gogol, Tolstoy, and Dostoevsky.

ANSWER: **Russia**

11. This thinker distinguished the actual use of language from its formal, abstract rules, analogizing one to the individual moves of a chess game, and the other to the rules of chess. For 10 points each:

[10] Name this formulator of *langue* [LONG] and *parole*, which he explained in a series of lectures delivered at the University of Geneva and compiled by Bally and Sechehaye. He theorized that a “sign” is a “double entity” consisting of a “signalling” signifier and the signified concept it expresses.

ANSWER: Ferdinand de **Saussure** [SAUCE-sure”]

[10] Saussure also posited that this language used *sonant coefficients* that Hermann Moller hypothesized were laryngeals. This language was theorized by William Jones, who suggested it gave rise to Sanskrit, Persian, Latin, Greek, Gothic, and Celtic.

ANSWER: **Proto-Indo-European** [or **PIE**; “Indo-European” doesn't exist, so don't prompt on that]

[10] The responses of Jacques Derrida and other mostly French thinkers to Saussurean structuralism are often lumped under this intellectual movement criticized by the likes of Jordan Peterson. It is usually seen as a response to modernism.

ANSWER: **postmodernism**

12. This country titles an orchestral rhapsody by Emmanuel Chabrier. For 10 points each:

[10] Name this homeland of Isaac Albéniz, who depicted it in his piano suite *Iberia*. The fandango, a couples' dance in triple meter, originates from this country.

ANSWER: **Spain** [or **Espana**]

[10] This composer included such movements as “Alborada” and “Fandango asturiano” in his *Capriccio Espagnol*. This composer also wrote the symphonic suite *Scheherazade*.

ANSWER: Nikolai Andreyevich **Rimsky-Korsakov** [do not accept or prompt on partial last names]

[10] The fandango inspired the final movement of a guitar quintet by this composer, who spent much of his life in Spain. This man depicted street singers and other nocturnal goings-on in his *Night Music of the Streets of Madrid*.

ANSWER: Ridolfo Luigi **Boccherini**

13. This novel, like many others by its author, is set in the fictional county of Wessex. For 10 points, name...

[10] This novel detailing Michael Henchard's illicit relationship with Lucetta. In this work, both Henchard and Donald Farfrae hold the titular position, the latter highly knowledgeable of all things grain and corn.

Answer: *The **Mayor of Casterbridge***

[10] This author of *The Mayor of Casterbridge* also wrote about Bathsheba's reluctant marriage to William Boldwood after Sergeant Troy's death in *Far from the Madding Crowd*.

Answer: Thomas **Hardy**

[10] Thomas Hardy's ashes was buried in this famous section of Westminster Abbey. Both Geoffrey Chaucer and Ted Hughes are also memorialized in this area.

Answer: **Poet's Corner**

14. Name some things about the Pearl River Delta. For 10 points each:

[10] The Delta is entirely within this Chinese province home to the vast majority of Cantonese speakers. This province's capital is in the Delta region at Guangzhou.

ANSWER: **Guangdong**

[10] This autonomous city state is located off the coast of Guangdong near the Pearl River Delta. Its Youngspiration Party supports the independence of this former British colony from China.

ANSWER: **Hong Kong** [accept **Xianggang**]

[10] This second-largest city in the Pearl River Delta region initially gained prominence due to its location directly across the Chinese border with Hong Kong. Its Ping An Financial Center is the world's fourth-tallest building

ANSWER: **Shenzhen**

15. For 10 points each, answer the following about coming-of-age novels centering around Jewish characters:

[10] *The Adventures of Augie March* sees the title character enlist in the military before being stranded after his ship sunk. It was written by this author of *Humboldt's Gift* and *Herzog*.

ANSWER: Saul **Bellow**

[10] A Mordecai Richler novel centers on the apprenticeship of Duddy Kravitz, a property-obsessed boy growing up in this city's St. Urbain Street idolizing a crippled drug trafficker named Jerry Dingleman.

ANSWER: **Montreal**

[10] Philip Roth's novel *Goodbye, Columbus* takes place partially in this city. This city is also where most of the plot of *The Catcher In the Rye* takes place.

ANSWER: **New York** City

16. Answer the following about musicals composed by Stephen Sondheim. For 10 points each:

[10] This Sondheim musical follows the titular “Demon Barber of Fleet Street”, who seeks vengeance on Judge Turpin by slitting the throats of customers and baking their remains into pies.

Answer: **Sweeney Todd: The Demon Barber of Fleet Street**

[10] This other Sondheim musical, which features the song “Send in the Clowns”, takes its title from the literal translation of the German title of Mozart’s Serenade No. 13.

Answer: **A Little Night Music**

[10] The musical *Assassins* features a cast of characters who attempted to kill people with this title. Characters in the musical include John Wilkes Booth, Charles Guiteau, and Leon Czolgosz [“SHAWL”-“gosh”].

Answer: **President** of the United States of America [accept **POTUS**; accept clear equivalents]

17. This man undermined the power of the Golden Horde after defeating them at the Battle of the Terek River in 1395. For 10 points each:

[10] Name this Mongol leader who may have acquired his characteristic limp while stealing sheep and died before he could invade China.

ANSWER: **Timur** the Lame [accept **Tamerlane**]

[10] Tamerlane conquered this city’s namesake sultanate using flaming camels. Although it regained territory under the Lodi Dynasty, this city was sacked again by the forces of Babur in 1526.

ANSWER: **Delhi**

[10] After capturing this Ottoman sultan, who acquired his nickname from his quick conquest of Anatolia, at the Battle of Ankara, Tamerlane is said to have kept him captive in an iron cage and used him as a footstool.

ANSWER: **Bayezid I the Thunderbolt** [accept either number or nickname; accept **Bajazeth** or **Bayezid Yildirim** for **Bayezid**]

18. One mathematician from this country discovered a generalized formula for the area of cyclic quadrilaterals. For 10 points each:

[10] Name this country, the birthplace of Brahmagupta and Srinivasa Ramanujan.

ANSWER: **India**

[10] Ramanujan was famous for his solving of these kinds of equations. These equations are polynomials, usually in at least two unknowns, for which only integer solutions are sought.

ANSWER: **Diophantine** equations

[10] Upon being noticed by G. H. Hardy, Ramanujan started publishing papers at this University. Isaac Newton, Stephen Hawking and James Clerk Maxwell all studied at this school.

ANSWER: **Cambridge** University

19. These objects are described by the Stefan-Boltzmann equation, which improved upon Wien’s law. For 10 points each:

[10] Name these idealized objects that absorb all incident radiation.

ANSWER : **black bodies**

[10] This man’s namesake law resolved a problem where black bodies would emit an infinite amount of energy at UV frequencies. To solve that problem, this man proposed the existence of discrete energy levels, thus pioneering quantum theory.

ANSWER : Max **Planck** [or Max Karl Ernst Ludwig **Planck**]

[10] This quantity is exactly 1 for all ideal black bodies, and bodies with a value for this quantity between 0 and 1 are called gray.

ANSWER : **emissivity**

20. This magical item was first introduced in Charles Perrault's version of Hop-o'-My-Thumb. For 10 points each:
[10] Name this footwear which lets the user walk approximately 21 miles in a single step. They are related to, but better-named than, the Russian "fast-walker boots."

ANSWER: **Seven-League** Boots

[10] Vithar uses his Thickest Shoe to kill this wolf at Ragnarok. Like the Midgard Serpent, this canine is a son of Loki.

ANSWER: **Fenrir** [or **Fenris**]

[10] Hellskor were shoes placed on the feet of the dead with which to walk to Valhalla, which would presumably involve crossing this rainbow bridge guarded by Heimdall.

ANSWER: **Bifrost** [or **Bilrost** or **Bivrost**; accept **Asbru**]