

**OOT 2016: “Waiting for Goldman”**  
**Packet 13 (Editors 7)**

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1. Two novels in this language, *Dancing Lessons for the Advanced in Age* and *Vita Nuova*, consist of a single sentence each. In another work in this language, the pig Mefisto befriends the dog Karenin, whose death brings together the two protagonists, a surgeon and his estranged wife who is a photographer. Captain J. van Toch and Gussie H. Bondy introduce the world to the title creatures in a play written in this language, *The War with the Newts*. Tomáš [toh-mash] is the philandering husband of Tereza in *The Unbearable Lightness of Being*, a novel in, for 10 points, what language used by Bohumil Hrabal, Karel Čapek [chap-eck], and Milan Kundera?

ANSWER: Czech [accept čeština]

2. One painter from this country depicted a mythological figure ploughing a field of snakes, whose colours match the imperial Russian flag, in a painting used in its national pavilion at the Paris World Fair. Another symbolist pieta-like painting by the same artist depicts a mother with her dead son, staring at a bee with a swan in the background. Another artist from this country, who illustrated the Swedish version of the Hobbit, also first drew the Muskrat, the Groke and Snorkmaiden. For 10 points name this country of Axel Galen-Kalella and Tove Jansson [toe-vah JAN-son], artists who painted *The Defence of the Sampo* and illustrated and wrote stories of the Moomins respectively.

ANSWER: Finland [accept Suomi]

3. In a painting of this event, a wet moon illuminates the defenestration of a nude man: that painting was by Giorgio Vasari and was commissioned to celebrate this event. The initial perpetrators of this event identified each other by wearing white armbands and sewing crosses on their hats. Although they would recant immediately afterwards, the Prince of Condé [con-day] and Henry of Navarre escaped death at this event by pledging to convert to Roman Catholicism; while Claude Goudimel and Admiral Gaspard de Coligny [col-in-ee] were not so lucky. For 10 points, name this bloodbath of 1572, perpetrated in France against the Huguenots.

ANSWER: Saint Bartholomew’s Day Massacre OR Massacre de la Saint-Barthélemy [accept minor variations in wording]

4. The U.S. and U.K. led a boycott this country after it was implicated in selling slaves to the Spanish on the latter’s colony of Fernando Po in 1930. This country’s first native President was also its first in over a century not to represent the True Whig Party. That president of this country was Samuel Doe, who was tortured on video after being deposed by a man who later became president under the slogan: “He killed my ma, he killed my pa, but I will vote for him.” For 10 points, name this American-founded country in western Africa where Charles Taylor was involved in two civil wars.

ANSWER: Republic of Liberia

5. Helitrons, which use rolling circle replication, were first discovered in this organism. The B73 strain of this organism has recently been sequenced and it has the largest publicly available non-mammalian genome. The “Activator” and “Dissociator” genes were discovered in this organism; that Ac/Ds system was found to influence the patterns of colouration of this organism depending on where it was positioned on the chromosome. Originally domesticated from Teosinte grasses, it was in this plant that transposons were discovered by Barbara McClintock. For 10 points name this crop otherwise known as sweetcorn.

ANSWER: Maize [or “Z. mays” accept “sweetcorn” or “corn” before mention of the former]

6. Sydney Smith expressed a desire to burn this person alive due to the disturbing nature of virtuous acts. This person helped to raise a relative who opposed the religious liberalism of John Wilbur. This person’s work was sparked by the preaching of William Savery and, in 1840, this person founded a nursing school which inspired Florence Nightingale. In 1818, this person became the first woman to give evidence in Parliament and she is commemorated by panels in the Quaker Tapestry at Kendal depicting her work with the female inmates of Newgate Prison. For 10 points, name this English prison reformer who featured on the £5 note.

ANSWER: Elizabeth **Fry** (accept: **Elizabeth Gurney**)

7. Assuming the Prandtl-Glauert equation holds, Sears-Haack bodies minimize this force at supersonic velocities. The Dahl model leads to hysteresis loops and proposes a lag between velocity reversals. When velocity is accounted for in the steady state, the Stribeck curve can be used as a model, combining its Coulomb and viscous components. Amonton's laws only apply to the "dry" form of this force. Normal force times  $\mu$  is equal to the magnitude of this force, which is the subject of tribology. For 10 points, name this force which acts perpendicular to the normal force, resisting motion between sliding against each other.

ANSWER: **Friction** (accept equivalents like drag)

8. Gayatri Spivak's reading of this novel as a critique of imperialism used a reference to Volney's *Ruins of Empire* as evidence. The title character of this novel is in the library looking at a historical painting of his mother weeping at her father's coffin when he learns a shocking piece of information. Another character in this novel places a locket with a picture of the title character's cousin in the pocket of another character in order to frame her for the death of young William. The title character of this novel pursues the killer of Henry Clerval and Elizabeth Lavenza to the North Pole. For 10 points name this novel about an eponymous Genevan scientist by Mary Shelley.

ANSWER: **Frankenstein**; Or, *The Modern Prometheus*

9. One of this group sent the ambassador Megasthenes to the royal court at Pataliputra, having also married off his daughter to Chandragupta. Epithets given to some of this group of men include the father and son Monophthalmos and Poliorcetes. The former of these died aged 81 from a javelin thrown at the battle of Ipsus. According to Arrian and Curtius, the conflict within this group started with the words "To the Strongest!" This group divided up the territories of their original leader at the Partition of Babylon, with Lysimachus being given the satrapy of Thrace, and Ptolemy that of Egypt, for 10 points, name this group of companions of Alexander.

ANSWER: **The Diadochi** or **The Successors**

10. A recent work by this author was inspired by a news story of a woman stepping in front of a train with her three young children. Another work by this writer of *The Train Driver* sees a school composition use ballroom dancing to imagine "a world without collisions." One play by this author is set in the whimsical house-cum-sculpture garden of Miss Helen, a real site known as the "Owl House." This playwright created Sam and Willie, the black servants of the white teenager Hally. For 10 points, name this South African playwright of *The Road to Mecca* and "Master Harold" ...and the Boys.

ANSWER: Athol **Fugard**

11. According to King Alcinous, this group were the ancestors of his people, the Phaeacians [Fae-acians], while Homer describes the Laestrygonians as closer to this group than men. According to Hesiod's *Catalogue of Women*, Zeus begat Heracles in order to protect mortals and gods from this group. A depiction of the great battle against this group was on a robe presented to Athena during the Panathenaea, and in that battle Enceladus was buried under Sicily by her. These children of Gaia, born from Kronus' blood, were, for 10 points, notable for their extraordinary size.

ANSWER: The **Giants** (**Gigantes**)

12. Giovanni Artusi criticised this composer's licentious use of dissonance. This composer of the songs *Sì dolce è'l tormento* and *Chiome d'oro* reused the Toccata which precedes his earliest surviving opera as the opening *Deus in adjutorium meum intende* from what is probably his most famous collection of religious works. Composed for his employer, the Duke of Mantua, the title character of one of this composer's operas descends to the underworld to search for Eurydice. For 10 points, name this Italian Renaissance and Baroque composer of the *Vespers of 1610* and the earliest opera still in regular performance, *L'Orfeo*.

ANSWER: Claudio **Monteverdi**

13. This author collaborated with Peter Sellars and Rokia Traoré on the 2012 opera *Desdemona*. In one novel, this author created the slave Florens, the Native American laborer Lina, and Rebekah Vaark, the inhabitants of a

seventeenth-century Virginia farm. Another opera with a libretto by this author of *A Mercy*, produced in collaboration with Richard Danielpour, is based on the life of Margaret Garner, whose story had previously inspired a novel in which Sethe flees Sweet Home. For 10 points, the title child murdered by its mother comes back to life in *Beloved*, a work by what American author?

ANSWER: Toni Morrison [accept Chloe Ardelia Wofford]

14. Glacials in this epoch include the Riss, the Mindel and the Ipswichian. The Brunhes-Matuyama magnetic field reversal occurred during this epoch which also saw the Fenno-Scandian ice sheet covering Northern Europe. Animals from this epoch include a family of lemurs called Archaeoindris and Diprotodon, a giant wombat. Fossil sites from this epoch include the La Brea Tar Pits and Pontnewydd [Pont-new-et] Cave where a Neanderthal boy was found. Homo Erectus was the dominant hominid for much of this epoch. For 10 points, name this geologic epoch located between the Pliocene and the Holocene.

ANSWER: Pleistocene

15. The carriage of the holder of this office was formerly escorted by the Blue Hussars until an accident at a horse show led the holder of this office to use a car and the escort to use motorcycles. There is uncertainty over whether the minimum age for the holder of this office is 35 or 36 as the two versions of its country's constitution differ. The holder of this office has a pew in the Anglican national cathedral of its country, which is still decorated with the arms of the British monarch and the first holder of this office to meet a British monarch was its first female holder, Mary Robinson. For 10 points name this head of state role currently held by Michael D. Higgins.

ANSWER: President of Ireland OR Uachtarán na hÉireann

16. With Shaun Hargreaves Heap, this economist wrote a critical introduction to Game Theory. This man argued that the post-war US economy decided to take leadership of the world economy by investing its surplus and creating a "global surplus recycling mechanism" but he argued that deficit spending and the tributes of global investment helped transform it into the Global Minotaur. This man rejected the idea of continued austerity without debt restructuring arguing that he would not "sign a surrender document" proposed by the Troika attempting to solve his nation's sovereign debt crisis. For 10 points name this modishly dressed former Greek Finance Minister.

ANSWER: Yanis Varoufakis

17. Ogurja is the longest island in this body of water and WikiLeaks revealed that BP hid a 2008 blowout and oil spill in this body of water which is home to the Kutum. It's not Lake Baikal, but this body of water is home to an endemic earless seal. Wall paintings in nearby Gobustan National Park suggest that it was once home to cetaceans and Garabogazköl[ga-ra-bo-gaz-koel] Aylagy is a lagoon which borders this body of water. The Ural and Volga discharge into this body of water and Turkmenbashi and Baku are both ports on this body of water. For 10 points name this inland sea bordered by Iran, Kazakhstan, Russia, Turkmenistan and Azerbaijan.

ANSWER: Caspian Sea

18. In this work, one character asks her conscience-stricken father "why leave your bed//When happy daylight is dead?" as he sits in a ruined chapel. This work's central character believes that a maid in this work is beautiful because she is the only woman he has ever known, he having been bound in a contract that will last another 63 years. At the end of this work, the title group are revealed to be aristocrats gone astray, allowing them to marry the many daughters of an officer who has "information vegetable, animal, and mineral". For 10 points, name this comic opera set in Cornwall and featuring the titular marine criminals, the fourth Savoy Opera by Gilbert and Sullivan.

ANSWER: *The Pirates of Penzance; or, the Slave of Duty*

19. This compound's synthase reversibly degrades IGP at its  $\alpha$ -subunit, which is connected to its  $\beta$ -subunit by a 25-angstrom hydrophobic channel. A strong absorbance peak at 280nm is observed fluorescence spectroscopy of this compound. Niacin is produced via kyurenin from this compound. This compound is converted into serotonin in the raphe nuclei and a UGG codon produces it. An operon responsible for the production of this

compound was the first repressible operon to be discovered. This compound is often incorrectly thought to be responsible for turkey-induced drowsiness. Abbreviated “W”, for 10 points name this amino acid with an indole side chain.

ANSWER: **Tryptophan** (prompt on **Trp**, and **W** before mention)

20. Gil Anidjar’s Derrida influenced critique of Christianity is titled for this word. A mysterious L. Ron Hubbard-created Scientology ceremony that addresses Hathor is named for this word. An annual ritual involving some of this stuff belonging to Saint Januarius takes place in Naples. The Marburg Colloquy concerned a debate over the metaphorical or actual drinking of this stuff. Jews avoided the plague on firstborns in Egypt by marking their doors with this stuff. The accusation that Jews kidnapped and murdered Christian children for use in rituals is named this kind of libel. For 10 points name this bodily fluid symbolised by wine during communion.

ANSWER: **Blood**

Tiebreaker/Spare

21. Clarence Dutton named two common forms of this substance and another form forms the upper part of “Layer 2” of the oceanic crust. The rhyolytic form of this is characterised by its high viscosity and silicate content and its andesitic forms coulées and domes. A form of this substance shows up brightly on Magellan pictures as it is a strong radar reflector due to its sharp angled surface. Types of this thixotropic liquid include pahoehoe and ‘A ‘ā. For 10 Points, name this molten rock formed by volcanic eruptions.

ANSWER: **Lava** (don’t accept or prompt on Magma)

1. The namesake receptors of these cells are expressed alongside CD3 and these cells gain their name for their site of maturation - the thymus. For 10 points each,

[10] Give this type of cell which can come in CD4 helper types and CD8 cytotoxic types

ANSWER: **T lymphocytes** [or **T cells**]

[10] The antibody producing B lymphocytes differentiate into two principal lineages when activated. The first produces short lived plasmablasts while the second produces memory cells and these other long lived cells which produce antibodies with high affinity antibodies towards the end of an infection

ANSWER: **Plasma** cells

[10] This other type of immune cell of lymphoid lineage can directly attack virus infected cells without the need for antibodies or MHC, thus making them unlike cytotoxic T cells.

ANSWER: **Natural Killer Cells** [do not accept “natural killer T cells”]

2. Who’d have thought there were poets in Wales? For 10 points each:

[10] Despite his booming R.P. voice, this poet, who urged against going gentle into that good night, was Welsh enough to depict the seaside town of Llarregub in the radio play *Under Milk Wood*.

ANSWER: **Dylan** Marlais **Thomas** [prompt on partial ANSWER, there are multiple Welsh 20th century poets called Thomas]

[10] This self-described “Super-Tramp” wrote “A poor life this if, full of care, // We have no time to stand and stare” in his poem *Leisure*.

ANSWER: William Henry **Davies**

[10] This poet of *Letter from a Far Country* and *A Difficult Birth* was appointed National Poet of Wales in 2008.

ANSWER: Gillian **Clarke**

3. The Chinese government can like your design for a stadium without liking your opposition to them. For 10 points each:

[10] Name this Chinese dissident artist and activist who served as artistic consultant for the Bird’s Nest Stadium.

ANSWER: **Ai Weiwei**

[10] In 2010, Ai Weiwei installed one hundred million ceramic versions of these items in a work named for them in the Turbine Hall of the Tate Modern in London.

ANSWER: **Sunflower Seeds**

[10] In this 1995 performance piece and the photo' triptych depicting it, Ai Weiwei destroys the title vessel to represent whatever the heck he meant it to represent.

ANSWER: **Dropping a Han Dynasty Urn**

4. This author wrote a novel about Hitler-studies professor Jack Gladney set at The-College-on-the-Hill. For 10 points each:

[10] Identify this author of *White Noise* who also wrote the massive *Underworld*.

ANSWER: Don **DeLillo**

[10] This DeLillo about Lee Harvey Oswald creates a story about the lead-up to his carrying out the assassination of JFK.

ANSWER: **Libra**

[10] This other contemporary American author wrote the meditative *On Being Blue* in addition to the novels *Omensetter's Luck* and *The Tunnel*, the latter of which is about William Frederick Kohler, a professor who published *Guilt and Innocence in Hitler's Germany*.

ANSWER: William Howard **Gass**

5. This designer's taste for diving inspired their collection Plato's Atlantis and the famous manta dresses. For 10 points each:

[10] Name this fashion designer who died in 2010 whose namesake label designed Kate Middleton's wedding dress.

ANSWER: Alexander **McQueen**

[10] McQueen worked as creative director for this house which created the "sack" waistline and is currently part of Louis Vuitton-Moët Hennessey.

ANSWER: **Givenchy**

[10] Perhaps McQueen's most celebrated show was this 2001 Spring/Summer Collection which featured Michelle Olley naked wearing a silver mask in a glass box full of moths.

ANSWER: **VOSS**

6. It's impossible to portray the earth's surface without distortion on a flat map, but that hasn't stopped folk from trying their best. For 10 points each:

[10] Probably the most famous map projection is the eponymous one of this 16th century Fleming. It doesn't distort lines of longitude but does show landmasses near the poles as unduly large, incurring the ire of many know-it-alls.

ANSWER: Gerardus **Mercator**

[10] Those know-it-alls along with Oxfam and UNICEF tend to prefer this projection which effectively reverses the distortion. It is named for both its Scottish creator and the German who tried to pass it off as his own idea in 1974.

ANSWER: **Gall-Peters** Projection

[10] Distortion on world maps can be shown by the indicatrix named for this French mathematician in which distortions are displayed using circles overlaying the map.

ANSWER: Nicolas Auguste **Tissot**

7. These structures are found across Britain, though they are particularly common in the south and west of England. For 10 points each:

[10] These mostly Iron Age constructions have several classifications, such as univallate, contour and promontory. Modern scholarship suggests that defence was not their only function.

ANSWER: **Hill forts**

[10] This largest hill fort in Britain is situated just south-west of Dorchester. It was likely occupied by Vespasian's forces as he took on the Durotiges, though evidence of siege is disputed.

ANSWER: **Maiden Castle**

[10] This multivallate fort in Somerset was associated by John Leland with Camelot, and there was notable re-fortification of the original Iron Age ramparts, and construction of a large timber "Great Hall" in the period following Roman withdrawal.

ANSWER: **Cadbury Castle**

8. In the sequel to this novel, its main character, Ostap Bender, successfully blackmails a millionaire in Turkestan. For 10 points each:

[10] Name this novel by Ilf and Petrov, in which Bender and the ruined nobleman Kisa cross Russia in search of jewels hidden in one of the title objects.

ANSWER: *The Twelve Chairs* [or *Dvenadtsat stulyev*]

[10] Ilf and Petrov are glowingly cited in Charles Kinbote's commentary to the title 999-line poem by John Shade in this novel.

ANSWER: *Pale Fire*

[10] *Pale Fire* was written by this Russian-American author of *Invitation to a Beheading* and *Lolita*.

ANSWER: Vladimir Vladimirovich Nabokov

9. This deity was one of eight tasked to protect the Dharma after being created by Izanagi and Izanami. For 10 points each:

[10] Name this Japanese thunder god who creates thunder by banging a drum.

ANSWER: Raijin (accept Narukami, Raiden-sama Kaminari-sama or Yakusa no ikazuchi no kami)

[10] Japanese folklore suggests that children hide this body part during thunderstorms because Raijin likes eating them. It is up for debate as to whether Adam had one of these.

ANSWER: Navels [accept obvious equivalents]

[10] Raijin was traditionally accompanied by the god Fujin, who carried one of these objects slung over his shoulders. The Greek figure Aeolus also had one of these objects.

ANSWER: Bag of Winds (accept word equivalents; prompt on bag, prompt on winds)

10. In a Bertolt Brecht play set in this country, several gods visit the title character, a prostitute called Shan Te. For 10 points each:

[10] Name this country, the setting of *The Good Person of Szechwan* and the home of Pearl S. Buck.

ANSWER: People's Republic of China [accept Zhonguo Renmin Gongheguo]

[10] This Chinese author, best known for his novel *Red Sorghum Clan*, was the surprise winner of the 2012 Nobel Prize for Literature.

ANSWER: Mo Yan [accept Guan Moye]

[10] The doctor Lin Kong endures a long, loveless marriage with Shuyu in hopes of eventually marrying Manna Wu in *Waiting*, a novel by this Chinese-American author.

ANSWER: Ha Jin [or Jin Xuefei]

11. ANSWER some questions about people in the Bible who had things fall on them in a fatal manner. For 10 points each:

[10] In the book of Judges, Abimelech orders his armour-bearer to kill him after a woman of Shechem drops one of these items on him. In Genesis, Jacob uses one of these as his pillow when he dreams of heaven at Bethel.

ANSWER: Stone [accept: Rock; in Abimelech's case, it's a millstone]

[10] In Luke 13, Jesus references the 18 people crushed at the collapse of the tower at this location south of Jerusalem. In John 9, Jesus orders the blind man to wash in the pool at this location.

ANSWER: Siloam [accept: Shiloah OR Silwan]

[10] Although II Kings says that he was stabbed, some sources claim this Assyrian king's sons crushed him with a statue. In the Bible, this king comes against Jerusalem in the time of Hezekiah only to have his army killed by God.

ANSWER: Sennacherib

12. This work was premiered at an event titled "*An experiment in modern music*". For 10 points each.

[10] Name this work by Gershwin that opens with a famed clarinet glissando

ANSWER: *Rhapsody in Blue*

[10] This man frequently conducted premieres for George Gershwin and commissioned his only piano concerto

ANSWER: Walter Damrosch

[10] This Gershwin work instructs the players of the maracas, claves, gourds and bongos to stand directly in front of the conductor. This piece was originally titled *Rumba*.

ANSWER: Cuban Overture

13. When it was captured in the Spanish-American War the defending Spaniards hadn't been told there was a war and thus invited the Americans in. For 10 points each:

[10] Name this largest Micronesian island. It was captured twice in World War Two.

ANSWER: Guam

[10] Guam was first contacted by a crew led by this European who called it the Island of the Lateen Sails, and later the Island of Thieves. He organized the first voyage of circumnavigation and died in the Philippines before his crew completed the journey.

ANSWER: Ferdinand Magellan

[10] The Philippines was perhaps in closest contact with Guam when it was a staging post on the Spanish Transpacific Galleon trade route between these two Colonial ports, taking silver one way and spices the other way.

ANSWER: Manila and Acapulco [both needed]

14. Its extended form considers the impact of hydration and oscillations. For 10 Points Each:

[10] Name this theory that explains the aggregation of solutions using electrostatic repulsions and Van der Waals forces.

ANSWER: Derjaguin-Landau-Verwey-Overbroek theory (accept names/letters in any order)

[10] Another influence on the behaviour of colloids is the formation of these entities, resulting from the variation of electric potential near a surface.

ANSWER: Electrical double layer

[10] These biomolecules coagulate easily at their isoelectric points due to their lack of an electrical double layer.

ANSWER: Proteins

15. This man was so incensed in 1856 that he gathered a posse mostly composed of his sons and hacked and shot 5 men to death at Pottawatomie Creek. For 10 points each:

[10] Name this violent abolitionist whose death was the subject of a popular Civil War Song and who carried out a raid on Harper's Ferry.

ANSWER: John Brown

[10] Brown's attack on Harper's Ferry was opposed by this other Abolitionist who thought armed insurrection was counterproductive. He wrote *My Bondage and My Freedom* about his escape from slavery.

ANSWER: Frederick Douglass

[10] Once trapped in Harper's Ferry in the mismanaged raid, Brown was captured by this American general who later lost the battle of Gettysburg and surrendered at Appomattox courthouse.

ANSWER: Robert E. Lee

16. This is the primary ingredient in Guacamole, favourite food of Jeb Bush, and the most common variety is the Hass. For 10 points each:

[10] Name this fruit which takes its name from the Nahuatl from testicle.

ANSWER: Avocado

[10] This enormous family of perennial herbs derives its name from the Greek for testicle. It contains several huge genera including *Phalaenopsis*, *Epidendrum* and *Bulbophyllum*.

ANSWER: Orchid

[10] This flour made from Orchid tubers is used to make a warm drink popular in Turkey and which was once popular in Britain. Its name is derived from the Arabic *ḥasyu al-tha'lab* meaning fox testicles

ANSWER: Salep (accept sahlab or Saloop)

17. Bertrand Russell said of this argument that he was certain it was wrong but could not for the life of him find a satisfying reason why. For 10 points each:

[10] Identify this argument for the existence of god most notably developed by St. Anselm in his *Proslogion*.

ANSWER: Ontological argument

[10] The ontological argument's success rests on the special nature of this property that is predicated of God by the necessary nature of God.

ANSWER: perfection [accept obvious equivalents]

[10] This philosopher rejected the ontological argument on the ground that existence is not a predicate.

ANSWER: Immanuel **Kant**

18. Finding these points is very important for the variational theorem, For 10 Points Each:

[10] Name these points where the derivative of a function equals zero.

ANSWER: **Stationary Points**

[10] Classification of Stationary Points for functions occurs by looking at this square matrix comprised of second order partial derivatives.

ANSWER: **Hessian**

[10] If the determinant of the Hessian is negative for a function, then the stationary point is classified as one of these.

ANSWER: **Saddle Point** (prompt on **Turning Point**)

19. This event led to the retroactive justification of the Brezhnev doctrine. For 10 points each:

[10] Name this period in which Alexander Dubček's liberalising reforms were crushed by an invasion of half a million Warsaw Pact troops.

ANSWER: The **Prague Spring**

[10] This revolt saw only the boots left of a statue of Stalin in the centre of the capital. Although Radio Free Europe broadcast advice on combating tanks, the USA was distracted by the Suez Crisis which started at the same time as this revolt.

ANSWER: The **Hungarian Uprising** of 1956

Following this event, the state paper, the *Neues Deutschland*, asked "What occurred in" the city where this event started. The date of this event became a public holiday in West Germany

ANSWER: The **1953 Uprising in East Germany** (prompt for the date)

20. This equation is derived from the Born-Landé equation by making a series of dubious approximations. For 10 points each:

[10] This equation uses the structure of NaCl to approximate the Madelung constant per number of formula units.

ANSWER: **Kapustinskii** equation

[10] Like the Born-Landé equation, the Kapustinskii equation is used to work out this quantity, defined as the energy of formation of a crystal from infinitely-separated ions.

ANSWER: **Lattice Enthalpy** (accept **Lattice Energy**)

[10] Lattice enthalpy is inversely proportional to this quantity, which the Kapustinskii uses the thermochemical form of to try to correct for covalency.

ANSWER: **Radius** (accept **Distance to closest ion** or other clear knowledge equivalents)