

OOT 2019: A Pope for Every Packet

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THE ANSWER TO THE LAST TOSS-UP SHOULD HAVE BEEN: **square numbers**

Packet 10

Toss-ups:

1. The Charnes-Cooper transformation converts a seemingly more general problem into one of these problems. That alternative version is the “fractional” form of this problem. Khachiyan provided the first weakly polynomial time algorithm for solving this problem using an iteratively shrinking ellipsoid and it is an open problem whether a strongly polynomial solution exists. One common method for solving this problem involves pivoting between the vertices of a convex feasible region; that is the simplex method. To convert inequalities to equalities, slack variables can be introduced to solve this problem. For 10 points, name this optimisation problem where the objective function and all constraints are linear.

ANSWER: **linear programming** [accept **linear optimisation** until the word “linear” is read. Prompt on just **optimisation** or **convex optimisation**] <JR>

2. Description acceptable.

Catherine the Great sought to employ people displaced by this policy, while José Moñino ensured that Lorenzo Ricci was imprisoned in its aftermath. As part of this policy, Gabriel Malagrida was strangled for alleged treason against José I of Portugal, while other targets of this policy were accused of fomenting the revolt of the Guaraní in Brazil, and the Hats and Capes riots in Spain. Prosecuted in Portugal by Pombal and in France by the Jansenists, this policy was preceded by controversy over the Malabar and Chinese rites. Finalised in 1773 by Clement XIV's papal brief *Domine ac Redemptor*, but reversed in 1814, for 10 points, name this eighteenth-century policy affecting a Catholic religious order founded by Ignatius Loyola.

ANSWER: **suppression** of the **Jesuits** / **Society of Jesus** [or equivalent description; accept **expulsion**] <AP>

3. In 2004, police in this city began a crackdown on criminal activity in one of its entertainment districts that takes its name from a theater that was planned but never built there. The historic center of this city is home to a royal residence that is still in use and is now one of the least populated of its twenty-three special wards. The Rainbow Bridge allows access to an artificial island in the bay of this city, where the Cocoon Tower stands near the world's busiest train station. Since 2017, a group of homeless people have been camping in this city's Yoyogi Park to protest the upcoming Summer Olympics, which this city will host for the second time in 2020. For 10 points, name this city whose neighborhoods include Kabukicho, Chiyoda, and Shinjuku, the capital of Japan.

ANSWER: **Tokyo** <CJ>

4. One method of analysing this property involves the use of Mueller matrices to operate on an object visualised using the Poincaré sphere. That object is the Stokes vector and allows analysis of the partial form of this property, in contrast to the Jones vector. The Faraday effect occurs when the direction of this property changes due to a strong magnetic field. The Wollaston prism can be used to split light with different types of this property, as it is made of birefringent material. At Brewster's angle, light with one type of this property is not reflected, meaning that blocking light with the other type reduces glare. For 10 points, name this property, the direction of the electric field of an electro-magnetic wave.

ANSWER: **polarisation** <LW>

5. The standard word for this good does not appear until offering lists of the fifth dynasty, but Hierakonpolis in Egypt was a major production site for this good during the Predynastic period, while by the Hellenistic, Pelusium was the city most noted for exporting this good from Egypt. Several deities including Sekhmet and Hathor were associated with this good, which could be coloured red with ochre from Nubia, while the Sumerian Hymn to Ninkasi, the god of this good, also comprises instructions on how to produce it. Those instructions describe how she 'soaks the malt in a jar' and then 'who holds the great sweet wort'. For 10 points, name this good, produced from Mesopotamia to Britain through the fermentation of barley.

ANSWER: **beer** <OSC>

6. Edward II delayed his coronation by several months in order to make renovations to this place, and Anne of Bohemia was married here in a chapel built to emulate the recently consecrated Sainte Chapelle. A mob damaged paintings on the walls of what was known as the King's Chamber in this building before a fire in 1512. Frederic William Maitland gave the name 'Model' to one event that occurred here, while an earlier iteration of that meeting was the first to include representatives of the major towns and broke up when its host was killed at the Battle of Evesham. For 10 points, name this London site where Simon de Montfort held what is retroactively considered the first of many parliaments.

ANSWER: the **Palace of Westminster** [prompt on Westminster, do NOT accept 'Westminster Abbey'] <CJ>

7. Pope Francis cited this text in an address of September 2014, commenting 'how many Christians live for appearances? Their life seems like a soap bubble.' Some have argued that its author, named Koholeth or 'the teacher', composed this text in his disaffected old age, while a central concept in this text is 'hevel', meaning 'vapour, or breath' is translated in the King James Version as 'vanity'. The text of this book is the source for many modern English phrases such as 'eat, drink and be merry' and 'the sun also rises'. For 10 points, name this book of Old Testament wisdom literature, sometimes attributed to King Solomon and the source of the phrase 'nothing new under the sun'.

ANSWER: Book of **Ecclesiastes** [accept **Koholeth** before name is mentioned] <BP>

8. Upregulation of A·O·X and U·C·P genes in thermogenesis in some *Arum* species is associated with this phenomenon. In *Drakaea* [DRACK-ee-ah] *livida*, the hinged lambellum throws the male thynnid [THIN-id] wasp onto the column where it is covered in pollen in a pseudocopulatory form of this phenomenon. The regional convergence of *Heliconus erato* and *H. mel·pom·me* is an example of the Mullerian form of this phenomenon. The negative frequency dependent form of this phenomenon is exemplified by hoverflies and wasps and is termed Batesian [BAIT-se-an]. For 10 points, name this term, exemplified by coral and king snakes, used to describe the adaptive resemblance of one organism to another, the model.

ANSWER: **mimicry** [accept **being a mimic**] <LC>

9. One piece for this instrument is based around a 15-note theme on alternating crotchets and minims, beginning C-G-E-flat-F, while it has been speculated the best-known piece by that composer for this instrument is actually a transcription of a violin sonata. The French tradition of playing this instrument saw the development of the forms of *plein jeu* and *grand jeu*, and this instrument's first concertos were written to serve as interludes by Handel for his operas. A number of works for this instrument were arranged for orchestra by Stokowski, including a C-minor *Passacaglia*. The instrument of a *Tocatta and Fugue in D minor* by J.S. Bach, for 10 points, name this large keyboard instrument featuring manuals and pedals.

ANSWER: **organ** <AP>

10. Under this government, groups of families were combined into units called *krom*. This group dominated a government-in-exile known as GRUNK, while the government that succeeded it in power instituted a 'National Day of Hatred' for it. This regime, which was defeated by the Salvation Front, gained popular support after Operations Menu and Freedom Deal. Michael Deeds was one of the last foreigners to die at a detention center run by this

government in a former secondary school whose name translates as ‘Strychnine Hill’. Many prisoners from Tuol Sleng were executed at Choeung Ek and other ‘Killing Fields’ by, for 10 points, what Cambodian regime led by Pol Pot?

ANSWER: **Khmer Rouge** <CJ>

11. A model of this process takes place on the ‘processing’ and ‘perception’ continuums according to a four-stage model of it by Michael Kolb. A theory for this process outlines ‘live models’, ‘verbal instruction’ and ‘reproduction’ as three ‘modelling stimuli’ for it. The objectives of this process are mapped out for the cognitive, affective and sensory domains according to a taxonomy of it developed by Michael Bloom. A theory developed by Michael Bandera is named for the ‘social’ form of this process, the associative form of which involves a new response becoming associated with a particular stimulus. For 10 points, name this process of acquiring new knowledge.

ANSWER: **learning** [prompt on education] <GDC>

12. An opera by this composer ends with the lines ‘Outside this room the chill of grace / lies heavy on the morning grass’; earlier a woman in that opera, who had compared a view to Brueghel, is delighted to be given an elephant. The protagonist of another of this composer’s operas sings an aria based on Baudelaire’s ‘Un hémisphère dans une chevelure’, while that opera’s first act closes with one of John Donne’s *Holy Sonnets*, ‘Batter My Heart, Three-personed God’. One of this composer’s title characters sings about how ‘News has a kind of mystery’ after an instrumental depiction of the landing of the *Spirit of ‘76*. For 10 points, name this American composer of *Doctor Atomic* and *Nixon in China*.

ANSWER: John Coolidge **Adams** <AP>

13. Bradford Collins collected a number of essays on this artwork demonstrating a range of methodological approaches in a book titled *Twelve Views* of this artwork. Two studies for this painting depict the central figure wearing a black hat and crossing their hands, neither of which correspond to the final version. Gaston La Touche modelled for a top-hatted man visible at the right-most edge of this painting, whose artist may have been influenced by photography to include a blurry seated crowd in the background. In this painting, a bowl of oranges and bottles of beer sit on a surface on which the central figure, Suzon, rests her hands. For 10 points, name this late work by Edouard Manet set in a Parisian music hall.

ANSWER: A **Bar at the Folies-Bergere** [or *Un bar aux Folies Bergère*] <IB>

14. One philosopher’s work on this concept was rebutted in a 1981 book by Michael Silk and Joseph Stern. Christiane Sourvinou-Inwood wrote a 2003 book about the relationship between this concept and religion. Hegel distinguished between the Classical and later forms of this concept, and theorised that the Classical form of this concept is created by the conflict between ethical institutions. Nietzsche argued that this concept was formed through the fusion of Apollonian and Dionysian artistic impulses. For 10 points, give this concept theorised to cause catharsis through pity and fear in Aristotle’s *Poetics*, which used as its primary model Sophocles’ *Oedipus Rex*.

ANSWER: **tragedy** [accept Greek **tragedy** or Attic **tragedy**; do NOT accept ‘drama’] <AH>

15. It’s not the *Odyssey*, but the protagonist of this work says of a woman named Circe that ‘Parian marble by comparison lost its sheen’. The protagonists of this work are seduced and tortured by a priestess named Quartilla for supposedly attempting to reveal secrets of Priapus’ cult. In this work, a host ignorantly claims Hannibal was at the fall of Troy before beginning to set forth his will in great detail. That host offers ‘plebeian fare’ of twelve dishes matching the Zodiac to the protagonists. Described in the early twentieth century as ‘one of the most licentious and repulsive works in Roman literature’, for 10 points, name this prosimetric work written by Petronius in which Eumolpus and his companions dine at one point with Trimalchio.

ANSWER: **Satyricon** [or *Satyrice*; prompt on *Dinner at Trimalchio’s* or *Cena Trimalchionis* before the end] <OSC>

16. A poem by an author with this surname ends with the narrator saying to a long-time lover 'I hardly taste you at all for I know your savour / But I am completely nourished'. Another poem by that author of this surname tells of a dress whose train makes a 'pink and silver stain / on the gravel'. That poem by an author of this surname begins with the line 'I walk down the garden paths'. Another author of this surname, which they share with the author of *Decade*, wrote about 'a girdle of orange' bracing the 'tingling Statehouse' of a city in whose throat 'a monument sticks like a fishbone': that city is Boston. For 10 points, give this name, shared by American Confessional poets Amy and Robert.

ANSWER: Lowell <GDC>

17. One character with this profession is reported as dying 'with clog of conscience and sour melancholy' while their co-conspirator with this profession is reprieved because of the 'high sparks of honour' seen in them. Another character with this profession compares people to plants, observes that one of their play's title characters 'hath not been in bed to-night', and offers the unheeded advice 'they stumble that run fast.' One of these figures suggests that Hero pretend to be dead in *Much Ado About Nothing*, while Laertes describes another of these figures as 'churlish' after they remark that Ophelia's 'death was doubtful'. For 10 points, identify this profession held by many of Shakespeare's characters, such as Lawrence in *Romeo and Juliet*.

ANSWER: priest [accept abbot, bishop, friar, etc.] <AP>

18. In the catalyst $V \cdot 6 \cdot M \cdot o \cdot 4 \cdot O \cdot 25$, molybdenum is present with this oxidation number. The catalysed autoxidation of a macrocyclic cobalt (II) complex has a reaction mechanism with this unusually high order. This number represents the oxidation state of chromium both in chromyl chloride and within the chromate anion. Atoms with this many equivalent bonds have O.h. point symmetry. The ligand E.D.T.A. has this number as its denticity. A single molecule of methanol contains this many atoms in total. Selenium and sulphur have this number of valence electrons, which is also the maximum number of electrons contained by P subshells. For 10 points, give this number of carbon atoms in a benzene ring, the atomic number of carbon.

ANSWER: six <AH>

19. In one of this band's songs, the singer declares 'My fried egg makes me sick every morning', which cross-fades with a news report about riots in Brighton. In an instance of word-painting in another of this band's songs, the word 'rise' is sung thirteen times, each a semitone higher. One of this band's albums was designed to look like a bootleg recording and was described by *Rolling Stone* as the greatest live rock album; that album is *Live at Leeds*. Eric Clapton and Elton John had parts in the film of this band's rock opera focused on the religious cult around the 'pinball wizard' Tommy. Notorious for destroying their instruments, for 10 points, name this band featuring Keith Moon and Pete Townshend, who wrote *Quadrophenia* and 'My Generation'.

ANSWER: The Who <AP>

20. This adjective appears in the title of a poem whose speaker repeats 'God forgive you that' about the addressee's pretences. That Alfonsina Storni poem is titled 'You Want Me [this adjective]'. This adjective describes an object created for 'the sincere friend / who shakes my hand frankly' in a poem by Jose Martí titled 'I cultivate a rose' described by this adjective. In a novel with this adjective in its title, the protagonist ends up establishing his own taxi company after killing Ashok, for whom he had been chauffeuring. This colour appears in the title of a novel in which Archie Jones marries Clara after attempting to commit suicide in his car by Zadie Smith. For 10 points, name this colour which describes a 'Tiger' in a novel by Aravind Adiga.

ANSWER: white [accept blanca] <IB>

Bonuses:

1. An unusual depiction of this scene by James Tissot [tee-SOH] shows only the feet of the central figure, instead depicting a crowd of grieving, mocking, and uninterested people. For 10 points each:

[10] Name this Biblical scene more conventionally depicted with the central figure either alone or flanked by two

other people undergoing the same punishment.

ANSWER: the **Crucifixion**

[10] This twentieth century artist depicted the Crucifixion unusually from above, with Christ hovering in a dark sky over a boat on a lake, while his hands stretch back to the Cross without nails in them.

ANSWER: Salvador **Dali**

[10] This depiction of the Crucifixion is dominated by a large green scroll in Jesus's right hand below which flies an angel holding a candle. A blue-faced woman in front of the Cross holds two children, while in the background, a town burns.

ANSWER: *The **Yellow** Crucifixion* <AP>

2. Plutarch says that this man cared more to exercise his mind, unlike his close friend and companion Pelopidas. For 10 points each:

[10] Name this Theban commander. His death at the moment of victory at the battle of Mantinea in 362 BCE left Greece, in Xenophon's view, in a state of 'uncertainty and confusion'.

ANSWER: **Epaminondas**

[10] Epaminondas' victory at Leuctra in 371 was followed by his first expedition to the Peloponnese, where, advancing into Messenia, he refounded Messene under Mt Ithome, freeing many of this enslaved class from Spartan control.

ANSWER: **helots**

[10] Despite his successes against Sparta, Epaminondas was not elected as general in 368 but was recalled after a failed expedition against Alexander of Pherae [fer-ay] in this region. Fifteen years later, Philip II of Macedon would assume control of this region of northern Greece, renowned for its cavalry, after the Battle of Crocus Field.

ANSWER: **Thessaly** <OSC>

3. In this figure's namesake purana, they marry Padmavati, the daughter of Brihadratha of Sinhala and engage in a war with the Kali. For 10 points each:

[10] In this figure's purana, they are trained by the Chiranjeevi and use their weapon Asi to kill criminals.

ANSWER: **Kalki**

[10] Kalki is the final avatar of this Hindu god, whose other avatars include Matsya, who is a half-man, half-fish figure, and Krishna.

ANSWER: **Vishnu**

[10] This king of the eagles is the mount of Vishnu. This figure is the most feared enemy of the nagas because they eat them and wear them as jewellery.

ANSWER: **Garuda** <GDC>

4. Small signal models for these components include the t model the and hybrid pi model. For 10 points each:

[10] Name these circuit components. In the bipolar junction type of these components, the collector current is controlled by the voltage between the collector and the emitter, provided that there is a voltage bias between the base and the emitter.

ANSWER: **transistor**

[10] In a small signal model, there is assumed to be a constant bias. The signal on top of the bias is assumed to be of this type. In the US and Canada, this type of current usually has a frequency of 60Hz.

ANSWER: **alternating** or **A.C.**

[10] Many transistors can be combined to form one of these devices. The ideal type of these devices has infinite gain and infinite input resistance, meaning that the voltage difference between the input terminals is assumed to be zero.

ANSWER: **operational amplifier** <LW>

5. A 1950s survey in this country that allowed subjects to freely enter their ethnicity resulted in a list of over a hundred different groups, which was pared down to thirty-nine in the first official census in 1954. For 10 points each:

[10] Name this country that today has fifty-six recognized *minzu*, or ethnic groups, which include the Muslim Hui as well as the majority Han.

ANSWER: People's Republic of **China**

[10] This southwestern province of China bordering Burma is home to many of the *minzu*, including the Miao and Yi. The Mosuo who live around this province's Lake Lugu are controversially identified as a branch of the Naxi [NAH-shee] and are sometimes called 'living fossils' for their practices of matriarchy and 'walking marriage'.

ANSWER: **Yunnan**

[10] This city in Xinjiang has historically been a hotspot of tensions between Han Chinese and Uyghurs [WE-gurs], including a two-day series of knife, bomb, and truck attacks in 2011. Residents in this far western city usually set their clocks back two hours in defiance of China's policy of one time zone for the entire country.

ANSWER: **Kashgar** <CJ>

6. In one novel, a character travels to his hometown and is cheered on by a crowd as he squeezes the hand of a statue of this man as part of his campaign to play him in a film. For 10 points each:

[10] Name this leader. Another portrayal of this leader comes to life in a waxwork museum in the novel *Lying Down to Die*, while pigeon-dropping-covered statues of this leader are imagined roaming the city in a novel in which a lawyer searches his half-brother's newspaper columns for news of his wife.

ANSWER: Mustafa **Kemal Atatürk** [accept either underlined portion]

[10] Statues of Ataturk appear in this Turkish author's novels *The Black Book* and *Snow*. This Nobel Prize-winning author also wrote *My Name is Red*.

ANSWER: Orhan **Pamuk**

[10] Kemal, the narrator of this other Pamuk novel, mentions a framed photo of Atatürk whose frown resembles that of his beloved, Fusun. In this novel, Kemal first observes Fusun while buying a handbag and goes on to collect objects she has used, such as cigarette butts and hair clips.

ANSWER: *The **Museum of Innocence*** [or ***Masumiyet Müzesi***] <IB>

7. This gymnast has two skills named after her: a Cheng vault with an extra half-twist, and a double layout with a half-twist on floor, which Quartz profiled in 'The Gravity-Defying Physics of [this gymnast]'. For 10 points each:

[10] Name this American artistic gymnast, often speculated to be the greatest of all time. She won four gold medals at Rio 2016 and holds the record for the most golds at the World Gymnastics Championships.

ANSWER: Simone **Biles**

[10] The Biles vault has a 6.4 D-score, the same as this infamously difficult vault, also known as the 'vault of death' because of the significant risk of injury attached to it. It is named for the Russian gymnast who first completed it in 1999; four others have managed it since.

ANSWER: **Produnova**

[10] Female Olympic gymnasts also compete on this piece of apparatus. Simone Biles fell on this apparatus at the 2016 Olympics, meaning that this event was the only one not to win her gold in Rio; however, the difficulty of her routine still gained her a bronze medal.

ANSWER: balance **beam** <DC>

8. According to the central limit theorem, given a high enough number of samples, their mean will always tend to this distribution. For 10 points each:

[10] Name this distribution, which has an e to the minus x squared shape. It is commonly referred to as a bell curve.

ANSWER: **normal** distribution [accept **Gaussian** distribution]

[10] This distribution can be approximated by a Normal distribution in the limit of sufficiently large mean. This distribution describes the probability of a number of events happening in a given amount of time, given that they happen randomly and a constant average rate. This distribution's mean is equal to its variance.

ANSWER: **Poisson** distribution

[10] For a sample of n observations, this distribution with n minus one degrees of freedom can be defined as the distribution of the location of the sample mean relative to the true mean, multiplied by square-root of n , divided by the sample standard deviation.

ANSWER: Student's **t**-distribution <LW>

9. Lord Templeton claimed in the judgement for this case that 'cruelty is uncivilised'. For 10 points each:

[10] Name this case, whose ruling has been criticised for being heteronormative, and Templeton's assertion that the consent of the 'victims' considered in this case was 'dubious or worthless' is particularly controversial.

ANSWER: *R v* ['The Crown against'] **Brown** [accept the **Spanner** case]

[10] *R v Brown* involved a group of men consenting to this practice, which involves giving or receiving pleasure from acts involving pain.

ANSWER: **sadomasochism** [or **S&M**, accept **BDSM**]

[10] The *R v Brown* implies that it is not possible to consent to this specific crime, which the defendants in the case were convicted of and which carries a maximum sentence of 5 years.

ANSWER: **Assault occasioning actual bodily harm** [or **actual bodily harm** or **ABH**; prompt on "assault"]

<GDC>

10. The British ships HMS *Mimi* and HMS *Toutou* were transported overland with great difficulty from Cape Town to fight on this body of water. For 10 points each:

[10] Name this body of water. Engagements on it were adapted into the novel and film *The African Queen*. Britain and Belgium eventually took control of Kigoma on this lake, before advancing on Tabora.

ANSWER: Lake **Tanganika**

[10] German forces in East Africa were commanded by this man, nicknamed the 'Lion of Africa'. This man, who later told Hitler to 'go fuck himself', fought a long if ultimately futile guerrilla campaign with 14,000 men against 300,000. Fluent in Swahili, his force contained many Askaris.

ANSWER: Paul **von Lettow-Vorbeck**

[10] Von Lettow-Vorbeck's opponent in East Africa was this South African commander, who had fought in a commando during the Second Boer War. He helped to write South Africa's constitution, and served as Prime Minister from 1919-1924 and again from 1939-1948.

ANSWER: Jan **Smuts** <OSC>

11. Richard Rorty defines people who use this concept as having 'radical and continuing doubts about the final vocabulary she currently uses'. For 10 points each:

[10] Soren Kierkegaard analysed one form of this concept which requires one to 'merely hint at meaning elusively' and is named for a thinker who Kierkegaard called 'the unity of the comic and the tragic'.

ANSWER: **irony** [accept **ironism**]

[10] Kierkegaard's PhD thesis was titled 'concept of irony with continual reference to [this philosopher]', the primary teacher of Plato.

ANSWER: **Socrates**

[10] This Kierkegaard work is named for a form of despair that results from not aligning oneself with God. In this work Kierkegaard defines humanity as the tension between the 'finite and infinite'.

ANSWER: **Sickness Unto Death** <GDC>

12. In photorespiration, oxygen reacts with $R \cdot u \cdot B \cdot P$ with the result that the plants take up oxygen and release these molecules. For 10 points each:

[10] $Ru \cdot Bis \cdot Co$'s dominant function is to react $R \cdot u \cdot B \cdot P$ with this gas, ultimately resulting in the formation of sugars. In the overall equation for photosynthesis, six molecules of this gas react with six molecules of water to form one molecule of glucose.

ANSWER: **carbon dioxide** / **CO₂**

[10] In photorespiration, serine is exported from the mitochondrion to this small organelle, where serine is then converted to glycerate and returned to the chloroplast. These organelles can be generated from the endoplasmic reticulum.

ANSWER: **peroxisomes** [prompt on **glyoxysomes**]

[10] When RuBisCO successfully carboxylates RuBP, this cycle occurs, first elucidated by its namesake in a experiments pioneering the use of carbon-14 in biology. The cycle involves the reduction of 3-P·G·A to G·3·P, some of which is used to regenerate R·u·B·P, the rest of which is used in biosynthesis.

ANSWER: **Calvin** Cycle [accept **C3** photosynthesis, **Calvin-Benson** or **Calvin-Benson-Bassham** Cycle] <LC>

13. E. M. Forster accused André Gide [zheed] of ‘introduc[ing] mysticism at the wrong point’ in a chapter of *The Counterfeiters* in which Bernard wanders around Paris performing this action. For 10 points each:

[10] Name this biblically-inspired action. In Act V, Scene 1 of a play, Hannah tells a character to perform this action, before a ladder to heaven descends onto the stage.

ANSWER: **wrestling** an **angel** [prompt on **wrestling**]

[10] ‘Wrestling with Angels’ was the title of a PBS documentary about Tony Kushner, the author of the two-part ‘Gay Fantasia on National Themes’ *Angels in America*, which concerns the AIDS crisis in this US city. Holden Caulfield travels to this city and wonders about the ducks in Central Park in *The Catcher in the Rye*.

ANSWER: **New York** City

[10] In *Angels in America*, Roy Cohn is visited by the ghost of a real-life historical figure with this surname, whom he prosecuted in a trial. That woman with this surname is referenced alongside her husband in the line about a ‘Queer, sultry summer’ that opens Sylvia Plath’s *The Bell Jar*.

ANSWER: **Rosenberg** [accept Ethel **Rosenberg** or Julius **Rosenberg**; accept **Greenglass**, her maiden name] <IB>

14. In the first section of this novella, the titular character is found holding a bird which she has bitten, and asks ‘Have I done something wrong?’ For 10 points each:

[10] Name this 2007 novella in three parts, centring on a character whose refusal to eat later in the novel is connected to her desire to become a plant.

ANSWER: *The **Vegetarian*** (by Han Kang)

[10] This author created the passionate vegan and pacifist Oskar Schell, a 9-year-old boy who travels around New York City seeking the owner of a key he finds after his father’s death in the Twin Towers. This fiction author also wrote the bestselling non-fiction book *Eating Animals*.

ANSWER: Jonathan Safran **Foer**

[10] On being asked why they were a vegetarian, this playwright replied ‘Why should you call me to account for eating decently?’ This dramatist of *Pygmalion* and *Man and Superman* was an animal-rights activist for over 50 years.

ANSWER: George Bernard **Shaw** <DC>

15. One of the protagonists of this novel ridicules the rationalism of ‘Sir Chris’ while building a series of churches with secret Satanic features. For 10 points each:

[10] Name this novel, half of which is written in a simulation of seventeenth century prose, while the other follows the titular detective try to solve a series of murders in the present day.

ANSWER: ***Hawksmoor***

[10] *Hawksmoor* is a novel by this author of *The Clerkenwell Tales*, who has also written biographies of T.S. Eliot and Charles Dickens, and written about LGBTQ history in *Queer London*.

ANSWER: Peter **Ackroyd**

[10] *Hawksmoor* belongs to this genre of literature, of which an early example is Scott’s *Ivanhoe*. Hilary Mantel won two Booker prizes for her novels *Wolf Hall* and *Bring Up the Bodies* in this genre.

ANSWER: **historical fiction** <AP>

16. The first movement of this piece was originally meant to be slow, but when Eugène Ysaÿe performed it quickly at the premiere, the composer was convinced to mark that movement 'allegretto ben moderato'. For 10 points each:

[10] Identify this A major work, whose finale begins with an original theme in canonic imitation, but then reuses themes from earlier movements, as part of the cyclic form for which this work and its composer are known.

ANSWER: César **Franck**'s **violin sonata** in A major [Accept César **Franck**'s **Sonata for Violin and Piano in A Major**; prompt on partial answer.]

[10] César Franck is also famous for his only symphony, which is in this key, as is another composer's *Reformation* Symphony.

ANSWER: **D minor** [Do NOT prompt on just 'D']

[10] This composer of the *Reformation* symphony also used the key of D minor in an early violin concerto, before his much more famous one in E minor.

ANSWER: Felix **Mendelssohn** [or Jakob Ludwig Felix **Mendelssohn** Bartholdy] <GB>

17. On a preaching tour for this Crusade, Baldwin of Canterbury apparently raised 3000 Welsh volunteers, including a man who took the cross after his wife accidentally smothered their child in bed. For 10 points each:

[10] Name this Crusade, led by Frederick Barbarossa, Philip Augustus, and Richard the Lionheart which captured Acre but fell apart before reaching Jerusalem.

ANSWER: **Third** Crusade [accept **Princes'** Crusade]

[10] This writer recounted Baldwin's preaching tour in their *Journey Through Wales*. This writer, who claimed to have built sand-churches rather than sandcastles at the seaside, also claimed that the kings of Tyrconnell were inaugurated by having sex with a horse.

ANSWER: **Gerald** of Wales [Giraldus Cambrensis]

[10] Gerald spent much of his life trying to become the bishop of this Welsh diocese, refusing any other bishopric. Despite being elected to it twice, he was never installed because of his open advocacy of this diocese's claim to be a metropolitan see independent of Canterbury.

ANSWER: **St David's** <AP>

18. For 10 points each, answer the following about singers being dismissed from the Metropolitan Opera:

[10] The Met's General Manager Rudolf Bing fired this singer via telegram while they were rehearsing *Medea* in Dallas. Earlier that year, this performer canceled a show in Rome after the first act due to vocal exhaustion.

ANSWER: Maria **Callas**

[10] Callas had been in negotiations to perform *Macbeth* and this other Verdi opera at the Met in the 1958 season. Nevertheless, she sang the role of Violetta in multiple productions of this opera that year, including one in London opposite Cesare Valletti as Alfredo.

ANSWER: *La **traviata***

[10] This African-American singer was fired during rehearsals for *The Daughter of the Regiment* in 1994 after, among other things, reportedly demanding that the rest of the cast not look at them. After they performed with the San Francisco Opera, backstage workers reportedly started wearing T-shirts that read 'I survived the [their name]'.

ANSWER: Kathleen **Battle** <CJ>

19. The insurrection of Vincent Ogé [oh-ZHE] preceded this event by one year, and the catalyst for it was a vodou ceremony at Bois Caïman [BWAH kay-MON] carried out by a maroon leader. For 10 points each:

[10] Name this conflict in which a massive uprising by enslaved people overwhelmed the agitation of the *petits blancs* on an island colony then known as Saint-Domingue.

ANSWER: **Haitian Revolution**

[10] Most of the French troops who died in Haiti did so as a result of this disease, known as 'black vomit' to the British troops who contracted it. Victims of this mosquito-borne illness included Charles Leclerc, the commander of the Napoleonic expedition and first husband of Pauline Bonaparte.

ANSWER: **yellow fever**

[10] After Leclerc's death, the Vicomte de Rochambeau assumed his post and feuded with this Haitian leader, who won the crucial Battle of Vertières and declared himself emperor of an independent Haiti in 1804.

ANSWER: Jean-Jacques **Dessalines** <CJ>

20. As part of this technique, biological macromolecules can be ionised through electrospray ionisation, which avoids making these molecules fragment when ionised. For 10 points each:

[10] Name this analytical technique, which measures the masses within a sample by sorting ions based on their mass-to-charge ratio.

ANSWER: **mass spectrometry** [or **mass spectroscopy** or **MS**]

[10] This peak in the mass spectrum is found directly to the right of the molecular ion peak and is usually caused by the presence of a carbon-13 atom.

ANSWER: **m+1 peak**

[10] In mass spectrometry, the molecular ion often fragments in this fashion. In this type of fragmentation, the carbon-carbon bond adjacent to the carbon bearing the functional group breaks.

ANSWER: **alpha** cleavage <AH>