

OOT 2019: A Pope for Every Packet

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THIS IS A FINALS PACKET.

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

Packet 13 - Finals II

Toss-ups:

1. One film by this director features a dream sequence in which the camera pans slowly over dirty water as a female voice whispers passages from the book of Revelation. In another scene from a film by this man, the camera cuts between close-ups of Brueghel's *Hunters in the Snow* and a levitating candelabra while a soundtrack based on JS Bach plays in the background. A third film by this director is divided into eight parts and details the life of a 15th century iconographer. In this director's most famous film, the psychologist Kris Kelvin travels to a space station where he is visited by apparitions of his deceased wife, Hari: that film is based on a novel by Stanislaw Lem, For ten points, name this Soviet director of *Andrei Rublev*, *Stalker* and *Solaris*.

ANSWER: Andrei Arsenyevich **Tarkovsky** <FL>

2. A brand of beer made close to this politician's hometown depicts them choking Dan Cherry in honour of them choke-holding a protestor. This politician sacked John Crow after Crow refused to stop pursuing an inflation target of 0%. A scandal during this politician's tenure was examined by the Gomery report and involved ad firms linked to this politician's party receiving sponsorship money for no work. Attack ads against this Prime Minister appeared to make light of his Bell's Palsy. Paul Martin produced a book of specific promises for this politician known as the Red Book. For 10 points, name this Canadian PM who served between 1993 and 2004.

ANSWER: Jean **Chretien** <GDC>

3. Description acceptable.

Recent radiocarbon dating by Wilmshurst *et al.* has suggested that this process occurred more rapidly than previously believed from the eleventh century through the end of the thirteenth. Genetic analysis of *Rattus exulans* has been used to suggest that this process started from a single central homeland. Traditions differ over whether coconut was already present or was brought by those carrying out this process to one region, and linguistic analysis suggests that those carrying out that specific example of this process came from the Marquesas Islands. Involving long distance travel to three corners of a namesake "triangle", for 10 points, name this process, which saw members of one people move from Samoa and Tonga as far as Easter Island and Hawaii.

ANSWER: **Polynesian colonization** [accept any answer which talks about Polynesians travelling across the Pacific to settle – anti-prompt on any specifics like "colonization of New Zealand by the Maori"] <OSC>

4. This thinker defined 'the number of the concept F' to be the extension or set of all concepts that are 'equinumerous' with F. One thinker was influenced by this thinker's claim that an assertive statement can be characterised by its 'assertoric force'. The claim that this thinker was a realist because they supported a 'straightforward two-valued classical semantics' is held by Michael Dummett, who is a scholar of this philosopher. It's not Alexius Meinong, but Bertrand Russell argued against this thinker's claim that the meaning of every sentence has two distinct parts in 'On Denoting': those two parts of a sentence are 'sense' and 'reference'. For 10 points, name this German logician, the author of *The Foundations of Arithmetic*.

ANSWER: Friedrich Ludwig Gottlob **Frege** <GDC>

5. Friedrich Chrysander's edition of this composer's keyboard works featured contributions from Brahms. The beehive-wigged Louise Bénédicte de Bourbon is depicted in a highly ornamented work by this composer called *The Bees*. Messiaen suspected this composer had 'never heard a nightingale', but praised their *The Nightingale in Love* anyway. As well as twenty-seven harpsichord 'orders', this composer also wrote *The Apotheosis of Lully*, containing an imagined duet with Corelli. The author of *The Art of Playing the Harpsichord*, for 10 points, name this Louis-XIV-era composer of pieces like the *Mysterious Barricades*, memorialised in a 'tombeau' by Ravel.

ANSWER: François **Couperin** <AP>

6. Maurice Dobb and this economist name a principle where in an economy where the share of investment is sub-optimal, it is optimal to invest in capital-intensive projects. A paradox sometimes named for this economist shows the Pareto criterion can be incompatible with individual rights using an example involving a 'lewd' and 'prude' agent: that paradox is sometimes known as the 'liberal paradox'. This economist extended Rawls' concern for primary goods to 'what goods do to human beings' in *The Equality of What*, which outlined their 'capability' approach to welfare economics. For 10 points, name this author of *Rationality and Freedom*, a Bengali Nobel Prize winning economist.

ANSWER: Amartya **Sen** <GDC>

7. The seesaw mechanism proposes a Majorana mass component for these particles which is comparable to the G.U.T. scale. These particles can be approximately described as Weyl ["vile"] spinors, which means that they must always have the same chirality. The oscillation of these particles between flavours is evidence for them having mass and a sterile form of these particles has been proposed to explain their mass. The anti-form of these particles is emitted alongside electrons in beta decay. The IceCube experiment detects where in the sky these particles came from. The flavours of these particles correspond to electrons, muons and taus. For 10 points, name these neutral and nearly massless leptons.

ANSWER: **neutrinos** [accept **anti-neutrinos** until "anti-form"] <LW>

8. Frau Messner's being in one of these locations ruins the unnamed protagonist's ability to flirt with Lorraine in a Stephen Poliakoff television play. A poem used to narrate a documentary film about one of these locations ends with the question 'For who can bear to feel himself forgotten?' One character leaves a cigarette lighter with the inscription 'From A to G' in one of these locations. In that film set in one of these locations, which are also the subject of the documentary *Night Mail*, Bruno meets an amateur tennis star who unwittingly agrees to murder Bruno's father in exchange for Bruno murdering his wife. An Alfred Hitchcock film is titled for, for 10 points, strangers meeting on what form of transport?

ANSWER: **trains** [accept **post train** or parts of a train, like **train carriage**] <GDC>

9. Ralph Voss detailed this author's platonic relationship with Barbara Baxley in a work subtitled *The Strains of Triumph*. A woman's boyfriend pretends her lover has stolen a car in order to drive him out of town in a play by this author. In another play by this author, visitors of a diner put on an enactment of *Romeo and Juliet*, and Carl and Grace have a 'just passing through' relationship. At a party in a play by this man, Millie drinks too much whiskey, which causes Rosemary to claim that her date will 'never rise beyond the gutter'. That play by this author ends with Madge leaving her mother's house to run away with Hal. For 10 points, name this author of *Picnic* and *The Bus Stop*.

ANSWER: William **Inge** <GDC>

10. In the first chapter of a novel, a character thinks of lines from 'Invitation to the Voyage' before being given some of this substance. A section of an essay about this substance compares an old driver to a crocodile. An author wrote the *The English Mail-Coach* about this substance, which Phuong regularly gives to Thomas Fowler in *The Quiet American*. That author described this substance as 'just, subtle, and mighty' in a work titled for it containing sections on its 'Pleasures' and 'Pains'. An author was inspired by consuming some of this substance to write a poem

describing a place where 'Alph, the sacred river, ran'. For 10 points, name this drug which titles some *Confessions* by Thomas de Quincey and inspired Coleridge to write 'Kubla Khan'.

ANSWER: **opium** [or **laudanum**] <IB>

11. In a 2014 book, cultural materialist Raiford Guins [Gwinz] argued that these things are 'historically specific', and examined how preservation and recontextualisation create the 'afterlife' of these things. A current large-scale exhibition at the V&A showcases art and photography associated with these things. In a 2007 review, John Lanchester noted how one of these things developed by Ken Levine critiques Ayn Rand's Objectivism. Families of Columbine students sought damages from creators of these things, due to their alleged encouragement of violence. For 10 points, name this broad category of media, examples of which include *BioShock* and *Grand Theft Auto*.

ANSWER: **video games** [or **computer games**; prompt on **games**] <DC>

12. Richard fitzNigel describes the Exchequer as a struggle between the royal treasurer and holders of this office, who are still chosen by pricking the sheet by their name. Holders of this office could technically be executed if they did not appear at an Exchequer by its fourth day of sitting, and were required to make up short-weight coinage from their own resources. Dating to before the Norman Conquest, holders of this office were expected to keep the *reeve*, or peace, in their designated counties. Responsible for the collection of county taxation, for 10 points name this oldest medieval office whose unpopularity is reflected in the local antagonist of the Robin Hood legend.

ANSWER: high **sheriff** <AP>

13. The Roche-Thatte algorithm can be used to detect these things. Veblen's theorem states that a set of edges can be written as a union of disjoint these things if and only if each vertex graph has even degree. George Szekeres [ser-ker-desh] and Paul Seymour proposed a problem which asks whether all bridgeless graphs could be covered by two of these things. The girth of a graph is measured by the shortest of these things and one definition of a bipartite graph is a graph without an odd one of these things. A closed walk with no repetitions of vertices and edges allowed is a definition of one of these things. For 10 points, name this term in graph theory, which most generally refers to a path of edges and vertices wherein a vertex is reachable from itself.

ANSWER: **cycles** <GDC>

14. One of these compounds is B·M·A·A, produced by cyanobacterial symbionts of cycads and thought to be responsible for A·L·S·P·D·C in the Chamorro people via consumption of fruit bats. Ketogenic forms of these compounds can be converted directly to acetyl-Co·A and fed into metabolic pathways. One type of these compounds is converted to L-DOPA, then dopamine in the synthesis of adrenaline. The acetylation of residues of these type of compounds on histone tails is part of the epigenetic code. For 10 points, name these compounds, twenty of which are specified by the genetic code, examples of which include aspartate, glutamate, lysine and glycine.

ANSWER: **amino acids** [prompt on a specific amino acid e.g. those mentioned, if unsure say 'I want the general term'] <LC>

15. This artist showed a figure reclining on a pile of out-of-proportion books on top of a stone slab referencing that work's commissioner, Ithiel Town. This artist showed a Gothic cathedral alongside Greek columns in *The Architect's Dream* and depicted a huge drinking vessel with boats sailing on the surface in *The Titan's Goblet*. This artist is depicted standing on a rock next to the poet William Cullen Bryant in another artist's *Kindred Spirits*. A series by this artist begins with a bare landscape titled *The Savage State* and depicts the growth and destruction of a city. For 10 points, name this American artist of *The Course of Empire*, a member of the Hudson River School.

ANSWER: Thomas **Cole** <IB>

16. In one novel set in this city, the narrator spends a day with a boy from the provinces who quotes his own poetry to him while preparing to set himself on fire that night. In addition to *A Minor Apocalypse*, the novel *Holy Week* recounts a failed World War II uprising in this city and was its author's second novel after *Ashes and Diamonds* to

be adapted into a film by Andrzej Wajda [VYE-da]. One writer blamed the Red Army for not intervening in this city in *The Seizure of Power* and satirized his contemporaries as figures like 'Alpha, the Moralist' and 'Gamma, the Slave of History' in another work. *The Captive Mind* contains Czesław Miłosz's [CHES-wof MEE-wozh] reflections on the post-war situation in, for 10 points, what capital of Poland?

ANSWER: **Warsaw** <CJ>

17. In one novel, a character who easily beats the protagonist at this activity continually calls them 'Slick': in that novel, Fielding Goodney beats John Self at this activity. One author claimed to explain the ascendancy of one player of this game in terms of their 'metaphysics', while Cecil Vyse refuses to play this sport with the Honeychurches in *A Room With a View*. James and Avril Incandenza run an academy teaching this sport in *Infinite Jest*, whose author claimed to excel at this sport in one essay because he 'felt comfortable inside straight lines'. For 10 points, name this sport, which David Foster Wallace wrote about in the essay 'Roger Federer as a Religious Experience'.

ANSWER: **tennis** <GDC>

18. In 2015, the oldest endowed chair at UCLA, which is dedicated to the study of these people, established a relationship with the Matenadaran research center. The LAPD targeted nearly a hundred members of this ethnic group in Operation Power Outage a year after revelation of a massive Medicare fraud. The victory of one member of this group in the 1982 California gubernatorial election was due to what became known as 'the Bradley effect', while Barack Obama broke a campaign promise in his remarks about these people on 24th April, 2016, by refusing to use a certain word when discussing a 1915 event. For 10 points, name this Caucasian ethnic group, members of whose diaspora have been unsuccessful in pushing the United States to officially recognize their genocide.

ANSWER: **Armenians** <CJ>

19. Recent research suggests that adopting the *intensified* heat-integrated equipment for this technique is more energy-efficient than the heat-integrated or stand-alone equipment. One form of this technique can be performed using a Kugelrohr [COO-gel-ror]. Merrell Fenske derived an equation to calculate the number of theoretical plates needed for a form of this technique. The simple form of this technique fails for certain mixtures such as acetone, chloroform and methanol, which form an azeotrope. For 10 points, name this process of physical separation from a liquid mixture by means of boiling followed by condensation.

ANSWER: **distillation** [accept specific forms such as fractional **distillation** or short-path **distillation**] <AH>

20. During this event, General Pepper led dragoons into Oxford in an effort to capture Colonel Owen, who escaped into Magdalen College. Part of this event is recounted in the ballad *Lo! The Bird Is Fallen*. In the aftermath of this event, the Indemnity Act pardoned nearly all those involved, but it was followed four years later by the Battle of Glenshiel. Lord Bolingbroke advised the leader of one side in this conflict, which ended when the Duke of Argyll defeated the Earl of Mar at Sherrifmuir, and it began because the Act of Settlement excluded Queen Anne's Catholic half-brother from the succession. For 10 points, name this rebellion in which the 'Old Pretender' James Stuart attempted to seize the throne of the newly created United Kingdom.

ANSWER: **Jacobite** rising of **1715** [prompt on **Jacobite rising** or equivalents; accept equivalents like **first Jacobite** rising; do NOT accept any answer mentioning the year 1745] <CJ>

Bonuses:

1. A study of these people by Duc Duy Nguyen et al showed that when these people are second or third generation immigrants, profitability increases. For 10 points each:

[10] Name these people, the heads of operations of a public company. Mark Zuckerberg holds this role at Facebook.

ANSWER: **Chief Executive Officer** [accept **chief executive**]

[10] Robert Bushman wrote about the link between risk-taking and the desire for wealth among CEOs of these institutions. Gillian Tett examined these institutions from an anthropological perspective in *Fool's Gold*.

ANSWER: **banks**

[10] Much of the anthropological analysis of corporate culture draws on this economist's work *The Great Transformation*, which examined the development of the 'market society'.

ANSWER: Karl **Polanyi** <GDC>

2. One play written by an author from this place was first performed in 1953 in a Manhattan church and follows the migration of a family of *jibaros* [HEE-ba-ros] to the Bronx. For 10 points each:

[10] Name this island home of the author of *The Oxcart*, René Marqués, whose English-language playwrights include Quiara Alegría Hudes [OO-des], who wrote the book of the musical *In The Heights*.

ANSWER: **Puerto Rico**

[10] For her play *Water by the Spoonful*, Hudes won one of these prizes, established in the will of a New York newspaper publisher, in 2012. The most recent winner of this award 'for Drama' was Martyna Majok for *Cost of Living*.

ANSWER: **Pulitzer** Prize

[10] The first Puerto Rican screenwriter to be nominated for an Academy Award, José Rivera, studied screenwriting with this other author of *News of a Kidnapping* at the Sundance Institute in the 1980s.

ANSWER: Gabriel **García Márquez** <CJ>

3. A team from Brown University restored an elephant-head capital from this city's Great Temple, only to find that it was soon vandalised by tourists throwing stones at it. For 10 points each:

[10] Name this city, approached by the Siq, which also carries a water channel from Wadi Musa that is part of this city's complex irrigation system. This city once controlled the Incense Route between the Arabian Gulf and Damascus.

ANSWER: **Petra** [accept **Raqmu**]

[10] Although it had free-standing buildings, the city of Petra is the most celebrated of this kind of settlement, of which other notable examples can be found around Saumur on the Loire, and throughout Cappadocia.

ANSWER: **troglodyte** [accept **cave dwellings**, etc.]

[10] The rock-cut centre of this city in southern Italy may be Europe's oldest continuously inhabited settlement, with caves dating from 7000 BCE still being used, despite the majority of its population having been forcibly removed in the 1950s on account of its unsanitary conditions.

ANSWER: Sassi di **Matera** <AP>

4. The constant associated with this value is symbolised with a lowercase 'k' and can be computed using the Eyring-Polanyi equation. For 10 points each:

[10] Name this quantity, formally the time derivative of the concentration of the product of a reaction and informally a measure of how fast the reaction proceeds.

ANSWER: **rate**

[10] The rate of a unimolecular reaction can be found by assuming it follows this mechanism where the species is brought to an excited state by collision and then either deexcites or decomposes, giving a rate law with fractional order between one and two.

ANSWER: **Lindemann**-Hinshelwood mechanism

[10] The calculation of the rate equation can be simplified by making this approximation that the concentration of the excited intermediate is constant due to equal rates of its creation and consumption.

ANSWER: **Steady state** approximation <JR>

5 Linda Heywood wrote a recent biography of this woman, who was given the name 'Ana de Sousa' when she converted to Catholicism in 1622. For 10 points each:

[10] Name this ruler of the Ndongo and Matamba kingdoms who assumed power after her illegitimate brother committed suicide and who allied with the Dutch in an attempt to keep the Portuguese from consolidating power in southern Africa.

ANSWER: **Nzinga**

[10] Nzinga is a national hero in this country, whose name the Portuguese mistakenly derived from her royal title. Today, women in this country will sometimes hold their wedding ceremonies near a large statue of her in its capital of Luanda.

ANSWER: **Angola**

[10] When Nzinga's brother Mbandi sent her to negotiate with the Portuguese governor of Luanda, she stunned the Europeans by using one of her servants as one of these things during the negotiations. A war over a 'golden' one of these objects resulted in the annexation of the Ashanti Empire after Frederick Mitchell Hodgson demanded to use it.

ANSWER: a **chair** [accept **stool**; accept **throne**; accept **place to sit** or equivalents] <CJ>

6. Later printings of this book include the addendum *Mistakes We Knew We Were Making*, which detail various omissions the author made to make the book flow more easily. For 10 points each:

[10] Name this 'big, daring and manic-depressive' literary memoir, chronicling the author's attempts to parent his younger brother Toph after their mother's death from stomach cancer. A recurring theme in the book involves the independent magazine *Might*, which the author creates with his friends in San Francisco.

ANSWER: *A **Heartbreaking Work of Staggering Genius***

[10] *A Heartbreaking Work of Staggering Genius* is the debut novel of this American author and founder of the *McSweeney's* literary journal. Their other works include *You Shall Know Our Velocity* and the technological dystopia *The Circle*.

ANSWER: Dave **Eggers**

[10] Perhaps the most iconic American literary memoir is *Walden*, a work inspired by two years that this transcendentalist author spent near the titular lake, living on the land of their mentor and friend Ralph Waldo Emerson.

ANSWER: Henry David **Thoreau** <DC>

7. For 10 points each, name some things which make J. Alfred Prufrock nervous:

[10] Prufrock is particularly self-conscious about this element of his appearance, which he mentions several times throughout *The Love Song of J. Alfred Prufrock*. At one point, the line 'Time to turn back and descend the stair' directly precedes a description of this attribute.

ANSWER: his **baldness** or **bald spot** or **thinning hair** [accept equivalents; prompt on **hair**]

[10] After asking 'should I part my hair behind?', fretful Prufrock also wonders if he 'dare[s]' to eat this particular fruit. A 'giant' one of these fruits features in a Roald Dahl novel.

ANSWER: **peach**

[10] Prufrock imagines being suspended 'in the chambers of the sea' until this ominous event. This eight-word line ends the poem.

ANSWER: till **human voices wake us, and we drown** <DC>

8. Giuseppe Tartini is the first person known to have owned a violin made by this luthier, whose *Messiah* violin, held in the Ashmolean Museum, has almost never been played. For 10 points each:

[10] Name this luthier, whose instruments are reputed to have the best sound quality of any ever produced, though numerous blind experiments have been inconclusive as to whether this is the case.

ANSWER: Antonius **Stradivarius** or Antonio **Stradivari**

[10] Tartini's best known work is this violin piece, noted for its extensive use of double- and triple-stopping, especially in its final movement, where its namesake feature appears over a rising sequence of arpeggios.

ANSWER: Violin **Sonata** in G minor '**Devil's Trill**' [prompt on **Devil's Trill**]

[10] Pope Clement XII commissioned Tartini to set the psalm conventionally given this title, derived from its first word. The score of Allegri's setting of this text for the Sistine Chapel choir was allegedly kept secret until it was transcribed by a 14-year-old Mozart.

ANSWER: **Miserere** or Psalm **51** <AP>

9. Representation theory studies homomorphisms of these structures into the general linear example of them corresponding to a given vector space. For ten points each:

[10] Name these algebraic structures consisting of an ordered pair of a set and a binary operation which must be associative and have inverses.

ANSWER: **Groups**

[10] Groups with one generator can represent this type of symmetry possessed by regular polygons. A square has the four-fold type of this symmetry whilst an oblong would only have the two-fold type of this symmetry.

ANSWER: **Rotational** symmetry

[10] Representation theory is aided by the use of characters which are constant valued functions of these subsets of the group. These subsets are defined by the equivalence relation 'a is equivalent to b if there exists a g such that a g is equal to b'.

ANSWER: **Conjugacy classes** [prompt on equivalence class though asking what the equivalence is called] <JR>

10. This conflict was accompanied by an extensive pamphlet war, the *libelli de lite*, in which figures such as Petrus Crassus and Humbert of Silva Candida argued over which side was creating schism. For 10 points each:

[10] Name this conflict which pitted Emperor Henry IV against a series of popes.

ANSWER: **Investiture** Controversy [/ Crisis / Contest, etc.]

[10] A pope with this name had a short-lived victory over Henry IV at Canossa by making the emperor wait in the snow for three days. That pope, supposedly a blacksmith's son, shares this name with a 'Great' pope who started the Roman mission to England with the joke 'Not Angles but angels'.

ANSWER: **Gregory** (VII / I)

[10] Later, Henry IV's siege of Rome would be lifted by the army of a duke with this epithet. That person had left Normandy with only about forty followers and became Duke of Apulia and Calabria.

ANSWER: (Robert) **Guiscard** (de Hautville) [accept the **Fox**, **Weasel**, **Cunning**, or reasonable equivalents] <AP>

11. Concerning this book, the author David Mitchell observed that "however breathtakingly inventive a book is, it is only breathtakingly inventive once". For 10 points each:

[10] Name this novel, in which the author Silas Flannery is working on a book entitled *In a network of lines that enlase*. His works attract the interest of a group called The Organization of Apocryphal Power.

ANSWER: ***If on a Winter's Night a Traveller*** [or ***Se una notte d'inverno un viaggiatore***]

[10] *If on a Winter's Night a Traveller* is a novel by this author of *Cosmicomics* and *Mr Palomar*.

ANSWER: Italo **Calvino**

[10] In this novel by Calvino, the protagonist is an orphaned cobbler's apprentice named Pin, who becomes involved with a partisan group in World War 2.

ANSWER: *The **Path to the Nest of Spiders*** [or ***Il sentiero dei nidi di ragno***] <AH>

12. Known for his idea of the centres of domestication of crops, Nikolai Vavilov died of starvation in a prison camp after he criticised the anti-Mendelian ideas advanced by the Soviet government. For 10 points each:

[10] Name this other Soviet scientist who won the favour of Stalin through his agricultural practices based on the inheritance of acquired characteristics which were implemented on collectivised farms such as planting crops at high densities, so the fittest seedlings survived.

ANSWER: Trofim **Lysenko**

[10] Lysenko became famous for his pseudo-scientific idea that soaking and chilling winter strains of this cereal crop would induce them to germinate in the spring, a process termed vernalisation.

ANSWER: **wheat** or **Triticum aestivum**

[10] Vavilov founded one of these places in Leningrad which became the largest in the world at the time and was protected by workers here during the siege of Leningrad. Another example of these places is in Svalbard.

ANSWER: **seed bank** or **vault** <LC>

13. This work's claim that 'selection acts primarily through social stratification. It is not immediately dependent upon bodily form' put the author at odds with Vacher Lapouge. For 10 points each:

[10] Name this work, which argues that 'languages were molded by thought, not thought by languages' to argue that the languages of the title people are not inferior to other languages.

ANSWER: ***The Mind of Primitive Man***

[10] *The Mind of Primitive Man* is by this early anthropologist who trained Margaret Mead and Ruth Benedict as well as conducting field work on the Inuits of Baffin Island.

ANSWER: Franz **Boas**

[10] Boas wrote a work title for the 'study' of this discipline, in which he argued for an approach that 'considers every phenomenon as worthy of being studied for its own sake'. Halford Mackinder, who developed heartlands theory, also worked in this discipline.

ANSWER: **geography** <GDC>

14. This artist's first big break came because Hank Crawford couldn't make a recording date, leading to this artist recording the album *Feels So Good*. For 10 points each:

[10] Name this artist, whose biggest hit was recorded with Bill Withers and reached Number 2 in the US singles chart. That hit by this artist claims that the title figures will be 'building castles in the sky'.

ANSWER: Grover **Washington**

[10] Grover Washington was a figure in this much-derided subgenre of jazz music that was very popular in the late 1980s and 1990s on US radio. This subgenre is a fusion of jazz and pop.

ANSWER: **smooth** jazz

[10] Smooth jazz's decline in popularity in the early 2000s resulted in many big radio stations closing, including KKSF in this westcoast city. Scott Mackenzie wrote a song titled for this city to promote the nearby Monterey Pop Festival in 1967.

ANSWER: **San Francisco** <GDC>

15. One house designed by this person has a so-called 'disappearing corner' and was constructed for a woman whose ideas on that house meant that she was given a co-designer credit. For 10 points each:

[10] Bart van der Leek told this designer to make a chair he had more colorful. This designer had that chair inscribed with the poem *Der Aesthet* by Christian Morgenstern.

ANSWER: Gerrit **Rietveld**

[10] Gerrit Rietveld was from this country. He designed the Metz & Co building in the Hague, which is located in this country.

ANSWER: the **Netherlands** [or **Holland**]

[10] This later Dutch designer and architect designed the Seattle Central Library and wrote the book *Delirious New York*, which praises the 'chance-like' nature of city living.

ANSWER: Rembrandt "Rem" **Koolhaas** <GDC>

16. Many of these paintings were excavated by Flinders Petrie, and feature their wealthy subjects naturalistically, in full face with particular emphasis on the eyes, mouth, and nose. For 10 points each:

[10] Name these portraits named after a region to the south-west of Cairo, the only substantial body of Roman panel-painting to survive.

ANSWER: **Fayum** mummy portraits

[10] The Fayum mummy portraits perhaps replaced these traditional three-dimensional elements of Egyptian burials, such as the gold and lapis lazuli example belonging to Tutankhamun.

ANSWER: funerary **masks**

[10] The encaustic, or hot wax, painting method of the Fayum portraits was also used for many of the oldest examples of this type of painting, including the *Christ Pantocrator*, which are found in St. Catherine's Monastery at Sinai.

ANSWER: **icon** <AP>

17. In one work, a thinker claims that this entity is the 'actuality of the ethical idea' as well as the 'actuality of concrete freedom'. For 10 points each:

[10] Name this entity, about which Walter Kaufmann argues that a claim by one thinker suggests that it is part of a divine strategy rather than being godly itself, which he argues is a mistranslation.

ANSWER: the **state**

[10] This thinker is often translated as saying that 'the state is the march of God through the world', which appears in *Elements of the Philosophy of Right*, a work by them which is a response to Karl Ludwig von Haller's *Restoration of the Science of the State*.

ANSWER: Georg Wilhelm Friedrich **Hegel**

[10] Alexandre Kojève gave a lecture series on how to read this work by Hegel, his magnum opus. Kaufman argued that anyone looking for Hegel's supposed thesis-antithesis-synthesis dialectic in this work would not find it.

ANSWER: ***Phenomenology of Spirit*** [or ***Phenomenology of Mind*** or ***Phänomenologie des Geistes***] <GDC>

18 In bilaterian organisms this process produces three germ layers and the archenteron. For 10 points each:

[10] This process is organized by the primitive knot and occurs when the blastula folds inwards at a site determined by the primitive streak.

ANSWER: **gastrulation**

[10] The blastopore becomes the anus in Deuterostomes but in Protostomes the blastopore becomes this structure. In mammals, the formation of smaller structures within this structure involves the formation of a germ composed of the enamel organ, dental papilla and the dental sac.

ANSWER: **mouth**

[10] This organ forms from the ectoderm and mesoderm, and neural crest cells migrate into this structure to form melanocytes. The stem cells of this organ are found in the stratum basale.

ANSWER : **skin** [anti-prompt on **dermis** and **epidermis**] <LC>

19. One tablet excavated at this town states 'May he who carried off Vilbia from me become liquid as the water. May she who so obscenely devoured her become dumb.' For 10 points each:

[10] Name this town, where the King's Spring was drained and excavated from 1979 to 1980. The excavations revealed many votive objects dedicated to the goddess who named this Romano-British town.

ANSWER: **Bath** [accept **Aquae Sulis**]

[10] Another important Romano-British excavation began at this Sussex site in 1960. This site, where an altar set up by Cogidubnus was found, was an enormous villa where a famous mosaic of a Cupid riding a dolphin was found.

ANSWER: **Fishbourne** Palace

[10] Both the Bath excavations and those at Fishbourne were led by this British archaeologist, Emeritus Professor of European Archaeology at Oxford. This man, an expert on the Celtic peoples, has written recent books such as *Britain Begins* and *On the Ocean*.

ANSWER: Sir Barry **Cunliffe** <OSC>

20. This phenomenon occurs when there is a large mass between us and an object being observed. For 10 points each:

[10] Name this phenomenon by which light is bent as it passes by a heavy object.

ANSWER: **gravitational lensing**

[10] Gravitational lenses are often found to be more massive than would be expected given how luminous they are. This is explained by the existence of this substance, which is also used to explain rotation curves of galaxies. This substance only interacts via gravity and is named for the fact that it doesn't interact with light.

ANSWER: **dark matter**

[10] This phenomenon is observed when the observer, gravitational lens and object being observed are exactly co-linear. If there is misalignment, an arc is observed instead. A double one of these phenomena occurs if there are two objects behind the lens.

ANSWER: **Einstein ring** [accept **Einstein-Chwolson ring** or **Chwolson ring**] <LW>