

OOT 2020: [The Search for a Middle Clue]

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THE ANSWER TO THE LAST TOSS-UP SHOULD HAVE BEEN: Yazidis

### Packet 7

#### Toss-ups:

1. Sara Ahmed uses this method to analyse ‘orientation’ in her book named for a ‘queer’ version of this method, while a ‘hetero’ version of this method is proposed by Daniel Dennett in *Consciousness Explained*. One practitioner used this method to argue that dualism ought to be replaced by a doctrine of ‘chiasm’. This method ought to begin with a suspension of trust in the objectivity of the world known as an ‘*epoché*’, which was later criticised by a philosopher who used this method to investigate boredom and our being-toward-death in *Being and Time*. For 10 points, name this first-personal study of the structures of consciousness whose practitioners include Merleau-Ponty, Husserl, and Heidegger.

ANSWER: **phenomenology** <NC>

2. A partially unsolved problem named for this property is whether every bounded linear operator on a complex Banach space has a non-trivial, closed subspace with this property. Max Dehn formed a version of this property for polyhedra to solve Hilbert’s Third Problem. The Kaufmann-Jones polynomial is an example of these things for knots that can be used to show that left and right trefoils are distinct. If a subspace has this property with respect to a linear transformation, then all elements in its image will also be in the original subspace. The Euler characteristic is a simple example of the ‘topological’ type of these quantities preserved by homeomorphisms. For 10 points, name this property describing a mathematical object that remains unchanged after an operation.

ANSWER: **invariance** [accept word forms; accept **invariant** subspace problem; accept Dehn **Invariance**; accept T-**invariant**] <DD>

3. Roman and Christian views of this specific concept are compared in a 2015 book by Teresa Morgan. Clement of Alexandria argued that *gnosis* was an aspect of this concept, Augustine held that the intellect ‘finds’ while this concept ‘seeks’, and Aquinas described this concept as ‘midway between knowledge and opinion’. After the disciples fail to cast out a demon from a boy, Jesus relates this concept to a mustard seed, while in Ephesians Paul instructs the taking-up of the ‘shield’ of this concept. The Epistle of James argues that this concept is ‘dead’ without works, while the Epistle to the Hebrews calls this concept ‘the evidence of things not seen’. For 10 points, name this theological virtue in a trio with hope and charity.

ANSWER: **faith** [accept **fidēs**; accept **pistis**; do NOT accept ‘belief’] <AP>

4. In a footnote at the end of this novel, its author suggests that readers with an ‘austere artistic code’ might want one figure to retain his ‘isolated and weird character’. A character in this novel constantly carries a spyglass and an hourglass while exploring an area she hates, and this novel’s title character is racked with guilt after his mother dies from an adder’s bite. One of the locals in this novel sticks an effigy of another character with pins and melts it; that character dies shortly afterwards in a weir. The reddleman Diggory Venn is only

able to save Clym while Wildeva drowns in an attempt to save Eustacia Vye at the end of this novel. For 10 points, name this novel about the residents of Egdon Heath, a work by Thomas Hardy.

ANSWER: *The **Return of the Native*** <ELM>

5. James Creelman reported on a massacre that occurred during this war and supposedly only left 36 inhabitants of one city alive. A Triple Intervention by Russia, France, and Germany occurred during negotiations for the treaty that ended this war. The prelude to this war involved the Gapsin Coup and the peasant Donghak Rebellion, prompting one side to intervene in violation of the Convention of Tianjin. This war's battles of Yalu River and Weihaiwei decimated one side's Beiyang Fleet after the other was allowed to capture Pyongyang. The Treaty of Shimonoseki granted the victor in this war control of Taiwan and Liaodong. Fought for influence over Joseon Korea, for 10 points, name this war fought by the Qing and Meiji governments.

ANSWER: First **Sino-Japanese** War [do NOT accept 'Second Sino-Japanese War'] <CJ>

6. *Description acceptable.* This phenomenon in North American forests has led to the break-up of the eluvial horizons of podzol soils, and is responsible for the spread of Deformed Wing Virus in honeybees. Baker's Law states that this phenomenon is more likely to be successful if it involves self-compatible species. Charles Elton argued that ecosystems with high biodiversity are less likely to be subject to this phenomenon. Blocking the enzyme aromatase to produce all-male populations has been used in a programme to deal with the effects of this phenomenon in Australia, which has also seen this phenomenon occur with cane toads. For 10 points, name this phenomenon, in which a non-native species colonises an ecosystem at the expense of native species.

ANSWER: species **invasion** [accept species **invading** an ecosystem, arrival of an **invasive** species, and other word forms; accept **invasion** of a named group e.g. earthworms, varroa mite, plants, or carp; prompt on non-native, exotic, alien, or nonindigenous species before 'non-native' with 'doing what?'] <LC>

7. Another person's memoir *Searching for Mercy Street* included accounts of being abused by this author. This author asks 'wouldn't it be good enough just to drink cocoa?' in their poem 'The Ambition Bird'. In another poem, this author finds 'boxes of pictures of people I do not know' and 'a five-year diary that my mother kept for three years'. This author tells their father 'I outlive you' at the end of 'All My Pretty Ones'. A poem about menstruating at the age of forty is found in this poet's collection *Live or Die*, while another of their poems describes 'mooring my rowboat / at the dock of the island'. The author of *The Anful Rowing Toward God*, for 10 points, name this Confessional poet who committed suicide by carbon monoxide poisoning.

ANSWER: Anne **Sexton** <AH>

8. In a move that was challenged as contrary to the Basic Law, an election was called after this politician had their coalition constructively vote for no confidence in their government, something this politician's successor also did in 2005. This leader held hands for several minutes with a long-term ally from another country in a symbol of reconciliation during a memorial service at Verdun. Following their departure from frontline politics, this politician revealed that they had received millions in cash donations, causing their protégé to denounce them in the *Frankfurter Allgemeine Zeitung*. That protégé is Angela Merkel. For 10 points, name this leader of the Christian Democratic Union until 1998, the West German chancellor who oversaw reunification.

ANSWER: Helmut **Kohl** <OSC>

9. A British-led expedition in this country discovered 70-metre-high stalagmites in one cave, suggesting it may be the largest in the world. The government of this country has recently forced many of the floating villages in one region to relocate to the mainland due to growing pollution. Although this country has banned sand mining offshore for export to Singapore, the practice continues in the delta of a river in this country's south. That river, where floating or deepwater rice is grown, is known in this country as the 'Nine Dragons' for the number of mouths that discharge into the South China Sea. Home to the Son Doong cave, for 10 points, name this country, the location of thousands of islands in Ha Long Bay and the Mekong delta.

ANSWER: **Vietnam** <OSC>

10. In the fourth of five piano variations on this song, the left hand plays a continuous sixteenth-note alternation between a low B and an A-sharp, underpinning that variation's B-minor modulation. As well as that work, Beethoven used this song in the second movement of his 24<sup>th</sup> piano sonata, and at the very beginning of a work originally written for the mechanical panharmonicon. In its original appearance, this song is sung at the end of a work set on the Isle of Athelney. Malcolm Sargent's arrangement of this song often replaces one written by Henry Wood for the end of the *Fantasia on British Sea Songs*. From Thomas Arne's masque *Alfred*, for 10 points, name this song which insists that 'Britons never will be slaves.'

ANSWER: **'Rule, Britannia!'** <AP>

11. Spinons do not possess this property despite being excitations of particles that do possess this property, because this property is instead carried by holons. The principle of minimal coupling adds the magnetic vector potential multiplied by this quantity to certain terms. This quantity describes how particles transform under a U(1) [U.one] transformation. A method that uses the 'image' form of this quantity works via the principle of superposition. Gauss's law states that the total electric flux through a closed surface is equal to the total of this quantity contained inside. The Coulomb force is proportional to the product of two of these quantities. For 10 points, name this quantity, which is negative for electrons and positive for protons.

ANSWER: electric **charge** <LW>

12. The opium-dealing antagonists of one novel by this author commit suicide in a club called Dove Cottage. In a novel by this author, the protagonist visits Margrave, Georgia, to see the death place of Blind Blake. That protagonist is arrested in a town called Despair and dropped in the neighbouring town called Hope in *Nothing to Lose*. A character created by this author repeats the saying 'hope for the best, plan for the worst'. In 2020, this author announced that they would be retiring from novel writing and handing over to their brother, Andrew Grant. This author's book *One Shot* was turned into a film named for their most famous protagonist starring Tom Cruise. For 10 points, name this author of the Jack Reacher series.

ANSWER: Lee **Child** [accept Jim **Grant** before 'Andrew Grant'] <GDC>

13. One adaptation of a work by this author opens Act III with a duet for soprano and mezzo-soprano before a courtesan attempts to steal the protagonist's reflection. The frame story of that adaptation of this author takes place during a performance of *Don Giovanni* in a Nuremberg tavern. Another adaptation of this author's work features two mazurkas in its first act and a 'Waltz of the Hours' in the third. A different work contains the notoriously difficult 'Doll Song,' sung by a character who in another version of the same scene is discovered by Swanhilda and Franz to be an automaton. For 10 points, name this German author, several of whose 'Tales' were adapted into a comic opera by Offenbach and whose 'The Sandman' inspired Delibes' ballet *Coppélia*.

ANSWER: E. T. A. **Hoffmann** <CJ>

14. Jim Marks has argued that this character's apparent passivity in the *Odyssey* is a deliberate reflection of Odysseus' wiles, in contrast to their more active role in the *Iliad*. This character opens one work by giving an abbreviated account of the *Oresteia*, which provokes their daughter to ask why this character is unmoved despite a hero's sacrifices. In the *Iliad*, this character is described as looking on the final fight of Patroclus 'with shining eyes', but accepts that they cannot intervene to save their son Sarpedon. The proem of the *Iliad* declares that this deity's plan was accomplished, while later in the poem this god is seduced on Mt. Ida by Hera. For 10 points, name this deity, Homer's 'father of gods and men', the chief god of the Olympians.  
ANSWER: Zeus <OSC>

15. Archeological evidence for the sack of this city includes 12 skeletons found unburied at its Halzi gate. Contemporary accounts of the destruction of this city include one in the Book of Nahum reading, 'It is decreed that this city be exiled and carried away'. Another chronicle of this city's fall describes the alliance between Cyraxes, king of the Medes, and Nabopallasar, king of Babylon. The destruction of this city preserved the reliefs from its 'Palace without Rival', one set of which shows the siege of the Judean city of Lachish, and another the *Lion Hunt* of a king whose namesake Library was preserved despite a fire in 612 BCE. For 10 points, name this Assyrian city, now modern Mosul, the capital of the rulers Sennacherib and Assurbanipal.  
ANSWER: Nineveh <OSC>

16. The presence of numerous 'oversights' in this work led one author to write a novel of 'chapters' that its author 'forgot' to include in it. In an essay commenting on Tobias Smollett's translation of this work, another author wrote that when its protagonist 'left his village, the modern world began'. A poet from Nîmes produces a partial transcription of this work that is praised as better than the original in one short story. A cliffhanger in this work requires its author to locate an Arabic version of it by Cide Hamete Benengeli, and this novel's final chapter forbids unauthorized sequels like the ones written between the publication of its first and second parts. In a short story by Borges, Pierre Menard is the 'author of', for 10 points, what work of literature by Miguel de Cervantes?  
ANSWER: *El ingenioso hidalgo* Don Quijote de la Mancha <CJ>

17. Sara Riddick examines the effect these things have on 'moral thought' in a work titled for the 'feminist ethical perspective' on these things. Michael Horowitz uses a dynamic analysis to consider whether 'experience matters' with regard to the effect these things have on international relations. The stability-instability paradox arises because of the existence of these things. Thomas Schelling developed the 'madman' approach relating to these things and argued that the existence of these things often generates proxy wars. For 10 points, name this type of weapon that could cause mutually assured destruction.  
ANSWER: nuclear weapons [or weapons of mass destruction or WMDs; prompt on weapons; do NOT accept other types of weapons like 'guns', etc.] <GDC>

18. On the exhumation of one member of this group 30 years after their death, their tongue was still wet. A split in this group led to Minister-General Michael of Cesena's execution of some members known as the Fraticelli over the doctrine of apostolic poverty. The founder of this group was reportedly dreamt holding up the Church by Innocent III, who approved the foundation of this religious order. Stories of this order's founder in the *Fioretti* relate that, at the town of Gubbio, they tamed a wolf, while on the mountain of La

Verna they received the stigmata. That founder of this order also preached to the birds and created the first live Nativity scene. For 10 points, name this order of friars, established by the 'Poverello' of Assisi.

ANSWER: **Franciscan** Order / the Order of the **Friars Minor** / the **OFM** [prompt on **friars** before mention] <AP>

19. A 1998 article by Jeong *et al* discusses using this element to catalyse aziridination of olefins, in a rare example of atom-transfer redox catalysis by a main group element. A Wohl-Ziegler reaction named for this element involves a reagent prepared by adding this element to succinimide under alkaline conditions. Halothane, the only inhaled anaesthetic containing this element, can be synthesised from trichloroethylene through an addition reaction with the diatomic form of this element. A solution of this element forms a classic test for the presence of an alkene. For 10 points, name this only non-metal element which is liquid at standard temperature and pressure, a halogen with atomic number 35 and chemical symbol Br.

ANSWER: **bromine** [accept **Br** before mention] <AH>

20. An artist with this last name was inspired by *Gone With the Wind* to create a work that includes a depiction of a black woman in silhouette giving birth to two children while standing up. This is the name of an art gallery that houses *The Big Self Portrait* by Chuck Close. As well as being the name of the major art centre in Minneapolis, this is also the name of a gallery that includes a painting of a man looking at his own reflection in a pool of water while a partly bare-chested red-headed woman looks on, as well as William Yeames' *When Did You Last See Your Father?*. For 10 points, give this name that links an artist with the first name Kara and an art gallery that houses John William Waterhouse's *Echo and Narcissus* in Liverpool.

ANSWER: **Walker** <GDC>

## Bonuses:

1. This thinker likened economists to plumbers in an article arguing that economists need to pay attention to the details of policy making. For 10 points each:

[10] Name this economist who, with Rohini Pande, wrote a paper simply entitled 'Dam' that examines the distributional effects of large dams in India.

ANSWER: Ester **Duflo**

[10] Duflo, along with Abhijit Banerjee and Michael Kremer, won the Nobel Prize in Economics for advances in this general field of economics.

ANSWER: **development** economics

[10] Development economists often study the 'global' form of this phenomenon. This phenomenon has both 'absolute' and 'relative' forms, with the former concept's 'line' set at \$1.90 a day by the World Bank.

ANSWER: **poverty** <GDC>

2. A character in this novel dies of a lung infection worsened by a walk across Clapham Common on a rainy day. For 10 points each:

[10] Name this novel, the last of one author's 'Catholic novels'. In this novel, the protagonist, based on the author, has a relationship with Sarah Miles, the wife of an impotent civil servant.

ANSWER: The ***End of the Affair***

[10] Sarah Miles breaks off her affair with Maurice Bendrix after his house is destroyed by a bomb during this event. *The Ministry of Fear* is also set during this bombing campaign.

ANSWER: the London **Blitz**

[10] In one novel from this non-Greene series of novels, Lady Molly dies during the Blitz, which Nick Jenkins discovers because he is about to inform her of a bombing at the Café de Madrid.

ANSWER: *A **Dance to the Music of Time*** <GDC>

3. Most human deaths by this disease are caused by the *falciparum* strain, while the *knowlesi* strain has similar symptoms, but is rarely found in humans. For 10 points each:

[10] Name this disease, characterised by cyclic fevers. Caused by *Plasmodium*, its vector is the *Anopheles* mosquito.

ANSWER: **malaria**

[10] Chronic malaria is thought to reduce resistance to Epstein-Barr Virus in the development of the endemic version of this cancer. This non-Hodgkin lymphoma is most common in children and tends to affect B cells in the germinal centre of lymphoid structures.

ANSWER: **Burkitt's** lymphoma

[10] Epstein-Barr Virus is usually the cause of this disease when it infects young adults. This disease is less commonly caused by cyto.megalo.virus, and is characterised by fever, sore throat, and extreme tiredness.

ANSWER: **glandular fever** [or infectious **mononucleosis**] <LC>

4. This historian's microhistory *The Return of Martin Guerre* investigated the story of the dispute between the title miller and an imposter. For 10 points each:

[10] Name this historian, who also wrote *Fiction in the Archives* about the narratives told by people seeking pardons for crimes during the early modern period.

ANSWER: Natalie Zemon **Davis**

[10] Judith Brown's microhistory *Immodest Acts* documented the trial of a member of this profession named Benedetta Carlini for engaging in a possibly coercive lesbian relationship. A 2019 discovery of lapis lazuli in the teeth of one member of this profession testifies to their work as scribes and illustrators.

ANSWER: **nun**

[10] *Immodest Acts*, like other microhistories such as *Montaillon* and *The Cheese and the Worms*, relies on the records of this religious institution, which had both 'Papal' and 'Spanish' iterations.

ANSWER: the **Inquisition** <AP>

5. The image on the shutters of this triptych is painted in full colour, unlike a semi-grisaille [gree-ZAY] version of a similar figure held in Rotterdam. For 10 points each:

[10] Name this triptych, whose central panel depicts Christ looking down upon figures all trying to grab handfuls from the title object. Figures such as the Pope and the king of France ride behind that object, which is guided by animal-headed demons.

ANSWER: *The **Haywain***

[10] *The Haywain* was painted by this Dutch artist, whose *Garden of Earthly Delights* has two flanking panels depicting heaven and hell.

ANSWER: Hieronymus **Bosch** [accept Jheronimus **van Aken**]

[10] This other Bosch work features Christ in a central roundel surrounded by a set of scenes depicting peasants fighting and a woman looking into a mirror held by a demon. Four exterior roundels contain scenes like an angel and demon perched over a dying man.

ANSWER: *The **Seven Deadly Sins** and the Four Last Things* <OSC>

6. During the Nazi period, this poem was officially declared written by an 'unknown author'. For 10 points each:

[10] Name this poem, which begins 'I know not what is the reason / Why I am so sad at heart'. This poem later describes the entrancing, spellbinding melody sung by the title golden-haired figure.

ANSWER: 'The **Lorelei**' [or 'Die **Lorelei**']

[10] 'The Lorelei' [LAW-re-lai] is a poem by this German lyric poet, who prophetically claimed that 'where they burn books, they will ultimately burn people as well'.

ANSWER: Heinrich **Heine**

[10] Heine asked 'Shall I lie in desert reaches, / Buried by a stranger's hand?' in this poem. This poem with a one-word title was engraved on three sides of Heine's tomb in Paris.

ANSWER: '**Where**'? [or '**Wo**'[voh]] <AH>

7. A singer born in this city used it as the backdrop for the music video of their song 'Shine Ya Light', in which they danced on top of this city's Newborn Monument. For 10 points each:

[10] Name this city, where another singer who spent three years here as a teenager received the key to the city in August 2018 for headlining the Sunny Hill music festival, which was organized by their father.

ANSWER: **Pristina**

[10] Rita Ora and Dua Lipa are two of several British and American pop stars with heritage of this ethnicity, which makes up most of Kosovo's population. For her performance in Pristina, Lipa wore red and black, the colors of this ethnic group's national flag.

ANSWER: **Albanian**

[10] Ora and the Albanian-American Bebe Rexha collaborated on the 2018 song 'Girls' with this singer and rapper, who sampled Tony Pabón's 'I Like It Like That' on one of their early hits.

ANSWER: **Cardi B** <CJ>

8. The most paramagnetic element, gadolinium, is in this block of the periodic table. For 10 points each:  
[10] Name this block of the periodic table, whose elements have outer electrons with three units of orbital angular momentum.

ANSWER: **f** block [accept **the lanthanides and the actinides**; prompt on either lanthanides or actinides alone by asking ‘which block are they in?’]

[10] When in its most common +3 [plus three] oxidation state, gadolinium has this number of unpaired electrons. Along with Curium(III) [curium-three], this number is the most of any known species.

ANSWER: **seven**

[10] The resulting large magnetic moment of gadolinium(III) [gadolinium-three] complexes makes them useful as contrast agents in this medical technique, whose ‘functional’ variant detects changes in blood flow in the brain.

ANSWER: **MRI** [accept **fMRI** or other variants] <AG>

9. The drafting of this document involved the testimony of men like Peter Wildeblood and Patrick Trevor-Roper, and it overturned both the Offences against the Person Act and the Labouchere Amendment. For 10 points each:

[10] Name this 1957 paper that recommended the decriminalization of homosexuality in the U.K. It was later revealed that its namesake chairman’s son Jeremy was gay.

ANSWER: **Wolfenden** report

[10] The Wolfenden report also considered workers in this profession, referring to them euphemistically as ‘Palmer’s’ and gay men as ‘Huntley’s’. Unlike homosexuality, this activity was condemned by the report, and police subsequently cracked down on it after the passage of the Street Offences Act.

ANSWER: **prostitution** [accept **sex work**, **solicitation**, or other reasonable equivalents]

[10] Twenty years after the Wolfenden report, the Programme for the Reform of the Law on Soliciting was established in 1976 to advocate for sex workers in this city, whose neighborhoods of Balsall Heath and Moseley were the location of a massive red-light district.

ANSWER: **Birmingham** <CJ>

10. Art consultant David Hulme has warned that this photographer’s works have no secondary market value, as they artificially inflate demand to take advantage of inexperienced collectors. For 10 points each:

[10] Name this landscape photographer, whose claim to have sold the most expensive photograph ever by selling *Phantom* for \$6.5 million has never been independently confirmed.

ANSWER: Peter **Lik**

[10] This rather better-regarded earlier landscape photographer created the collection *The Parmelian Prints of the High Sierras*. Along with Fred Archer, this photographer designed a system that categorised images from zero to ten, based on their black-and-white contrast.

ANSWER: Ansel **Adams**

[10] Lik’s *Phantom* was shot in one of these geographical features named Antelope in Arizona. Unlike his predecessors, Adams focused on transient phenomena such as light when photographing the Grand one of these geographical features.

ANSWER: **canyons** <AH>

11. Two competing accounts of this concept are the 'union' account and the 'robust concern' account, which holds that this concept is 'volitional'. For 10 points each:

[10] Name this concept, which David Velleman called moral in a 1999 paper that argues that this concept is tied to respecting the dignity of others as persons.

ANSWER: **love**

[10] An early exposition of the philosophy of love is found in this work by Plato. Aristophanes claims that Zeus cutting people in two was the origin of love in this work, which takes place at Agathon's drinking party.

ANSWER: **Symposium**

[10] This philosopher examined the Platonic view of love in their work *Love and the Individual*. This philosopher analyses the concept of objectification in *Sex and Social Justice*.

ANSWER: Martha **Nussbaum** <GDC>

12. One country's capital was moved from Taroudant to this city after its new rulers gained the support of the Hintata tribes in the surrounding Atlas Mountains. For 10 points each:

[10] Name this city, where the building of the El Badi palace was funded by ransom money demanded from the Portuguese after its rulers' victory at the Battle of Alcácer Quibir [al-KAH-ser KEE-beer].

ANSWER **Marrakech**

[10] Marrakech is a city in this country, where the Portuguese king Sebastian went missing at Alcácer Quibir.

ANSWER: **Morocco**

[10] This Moroccan dynasty established its capital at Marrakech and defeated the alliance of Sebastian and its deposed ruler Abu Abdallah Mohammed II. Succeeded by the reigning Alouite dynasty, this dynasty defended Morocco from the Ottomans and defeated the Songhai empire at the Battle of Tondibi.

ANSWER: **Saadi** dynasty <CJ>

13. Poet Kenneth Rexroth is often cited as the 'father' of this city's cultural Renaissance in the 1950s, with Madeline Gleason as its 'mother'. For 10 points each:

[10] Name this city, home to the City Lights Bookstore, where Rexroth organised the Six Gallery Reading.

ANSWER: **San Francisco**

[10] The San Francisco Renaissance is often associated with this American literary generation, whose leading poets included Allen Ginsberg, Gary Snyder and Michael McClure.

ANSWER: The **Beats** [or **Beat** Generation]

[10] This poet, whose several 'Revolutionary Letters' are collected in *Pieces of a Song*, also wrote *Memoirs of a Beatnik*. They were named San Francisco's Poet Laureate in 2009.

ANSWER: Diane **Di Prima** <NC>

14. The lost streets of this sunken English town have been mapped by archaeologists with ultrasound. For 10 points each:

[10] Name this medieval trading port on the North Sea coast. It was devastated by great storms at the end of the 13th century, and this town's church bells can supposedly still be heard tolling beneath the waves.

ANSWER: **Dunwich**

[10] Dunwich is in this county, one of the most affected by coastal erosion, whose Lowestoft Ness is the easternmost point in the UK. Orford Ness in this county is a shingle spit formed by longshore drift of material from places like Dunwich.

ANSWER: **Suffolk**

[10] This Norfolk town, home of the Britannia pier, also owes its existence to longshore drift. This town is located in The Broads National Park, which was created by the extraction of peat for the use of this town and

Norwich.

ANSWER: Great **Yarmouth** <OSC>

15. This phenomenon has been used to measure path differences of light to within an accuracy of 10 to the minus 24, and can also be used for spectroscopy. For 10 points each:

[10] Name this phenomenon that occurs when coherent waves superpose meaning that the amplitudes add, rather than the intensities.

ANSWER: **interference**

[10] In a type of interferometer named for this man, a beam of light is split by a beam splitter and sent down two perpendicular paths with mirrors at the ends of each before being recombined. This man conames an experiment with Morley that disproved the existence of the luminiferous aether.

ANSWER: Albert **Michelson**

[10] Another important type of interferometer is the Fabry-Perot etalon, which can produce very sharp peaks. This quantity is important in the analysis of the Fabry-Perot, and is given by the free spectral range divided by the linewidth.

ANSWER: **finesse** [do NOT accept or prompt on 'coefficient of finesse'] <LW>

16. These people descended from the Thule [thoo-li] culture, and they are referred to as 'skraelings' in Norse sources about Greenland and Newfoundland. For 10 points each:

[10] Name this indigenous people, considered distinct from the rest of the First Nations, who settled Alaska and northern Canada up to the Arctic Circle around the year 1,000 CE.

ANSWER: **Inuit** [accept **Eskimos**]

[10] The ancestors of the Inuit split from this other indigenous group around 3,000 BCE. These people developed the *baidarka*, a specialized kayak designed for transportation and hunting in the waters around their namesake western Alaskan islands.

ANSWER: **Aleuts** [accept **Aleutian** Islanders]

[10] Unlike the Aleuts, this Paleo-Eskimo culture was replaced by the Inuit when the Inuit developed the use of dogs as transport animals. Inuit myth alternately describes members of this culture as 'giants' and 'dwarves', and one of its settlements survived on an island in Hudson Bay into the twentieth century

ANSWER: **Dorset** culture <CJ>

17. Violations of the vow described by this Sanskrit term include using short weights or measures and intentionally buying something at too low a price. For 10 points each:

[10] Name this Sanskrit term. Meaning 'not-stealing', it is distinct from the vow of *aparigraha*, which enjoins people to refrain from possessiveness.

ANSWER: **asteya**

[10] *Asteya* is, along with *ahimsa*, one of the five vows taken by adherents of this ascetic Indian religion, which has white-clad and sky-clad groups of monks.

ANSWER: **Jainism** [accept word forms]

[10] The five main vows, plus seven optional ones, are part of right conduct, which, along with right faith and right knowledge, make up this group of ways to attain moksha.

ANSWER: **Three Jewels** [or **Ratnatraya**] <AP>

18. Femi Osofisan adapted this play to make the title character a nineteenth-century Yoruba princess. For 10 points each:

[10] Name this play. Two prison inmates rehearse this play in a different play, and Winston tries to pull out

after fearing that he will be humiliated by playing its female title role.

ANSWER: Antigone

[10] John and Winston rehearse a performance of *Antigone* in *The Island*, a work by this playwright. This playwright directed a performance of *Orestes* in Cape Town, and also wrote "*Master Harold*"...and the Boys.

ANSWER: Harold Athol Lanigan Fugard

[10] Fugard follows classical tradition by using a small number of characters in this play, in which tension develops between the half-brothers Morris and Zachariah due to their slightly different skin colours.

ANSWER: Blood Knot <AH>

19. This mineral is the principal component of emery, historically mined on the island of Naxos for use as an abrasive. For 10 points each:

[10] Name this mineral, which is often manufactured from bauxite or synthesised in crystalline form using the Verneuil [vern-UY] process.

ANSWER: corundum [prompt on, but do not otherwise reveal, sapphire or ruby]

[10] The presence of different transition metal impurities gives corundum a variety of colours. Corundum gemstones given this name are typically blue, but can be any of several colours except red, for which the term 'ruby' is reserved.

ANSWER: sapphire

[10] Corundum consists of oxygen atoms arranged at the vertices of octahedra in a slightly distorted version of this Bravais [bra-VAY] lattice, with aluminium atoms filling two thirds of the octahedra. This lattice has the joint highest packing density with the face centred cubic lattice.

ANSWER: hexagonal close packed [accept hcp] <AG>

20. Ludwig Daser probably added two more voices to a setting of this text after the death of its composer, who also wrote a mass based on a similar text hailing 'the star of the sea'. For 10 points each:

[10] Name this text, one version of which was set in a motet whose opening section includes the phrase 'serene Virgin' after the words 'full of grace, the Lord is with thee'.

ANSWER: Ave Maria [accept Hail Mary]

[10] That setting of the *Ave Maria* was by Josquin des Prez, whose other sacred compositions include one of these pieces, a motet with the text of Psalm 51. Another piece of this type for double choir features multiple high Cs in the treble part.

ANSWER: Miserere mei, Deus

[10] Josquin wrote a number of masses in this style, in which a namesake mostly-unchanged melody in one voice forms the basis of the polyphony. In his mass for the Duke of Ferrara, Josquin used one of these melodies derived from the letters of his patron's name.

ANSWER: cantus firmus <CJ>