

ACF Nationals 2013

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### Tossups

1. One man in this painting holds his glasses in his hands and rests his chin on a walking stick, while another man holds a pocket watch in his hand but does not look at it. A young couple standing on the left seems to be ignoring the central action of this work, whose right side shows the moon out of a window and a boy holding open a small metal door. A glass bowl with a skull in it is placed in front of this painting's central light source, which illuminates a man comforting his daughters who are frightened by the central action. That action is being conducted in front of an empty cage by a man who stretches one hand out towards the viewer while his other hand rests on the title device, a glass bowl containing a frantic white cockatoo. For 10 points, name this painting of a scientific experiment by Joseph Wright of Derby.

ANSWER: *An Experiment on a Bird in the Air Pump* [or *An Experiment with the Air Pump*]

2. Though not originally written in English, this opera is usually performed in America in Norman Kelley's English translation. One character in this opera bemoans her poverty in the aria "Wartet, ihr ungezogenen Wichte!" shortly after knocking over a jug of milk. The antagonist of this opera jumps around in glee while singing the aria "Hurr, hopp, hopp, hopp." Its second act ends with the "Dream Pantomime," and contains a song about fourteen angels keeping watch over the main characters when they sleep, known as the "Evening Prayer" or "Abendsegen." Between its first and second acts, an orchestral "Hexenritt" represents the ride of the antagonist. Richard Strauss conducted the 1893 premiere of this opera, in which the title characters are awoken by the Dew Fairy before encountering an evil witch. For 10 points, name this opera by Engelberg Humperdinck based on a Brothers Grimm fairy tale.

ANSWER: *Hansel and Gretel* [or *Hänsel und Gretel*]

3. One essay about this concept compares the story of the ring of Polycrates to a person who angrily wishes that an old man will die two weeks before that old man dies from a stroke. The first major work to discuss this concept argued that children are more susceptible to it than adults because they are mentally undeveloped, and was written by Ernst Jentsch. Another essay considers how this concept arises from repetitions, such as a person seeing the number 62 over and over in a short period of time. An essay about this concept connects the fear of losing one's eyes to the fear of castration, and discusses at length the etymology of the German word for this concept, *unheimlich*. That essay considers how this concept is produced by E. T. A Hoffman's character the Sand-Man and argues that it is caused by prosaic things which have been repressed. For 10 points, name this feeling that something is both strange and familiar at the same time, a concept which titles a 1919 essay by Sigmund Freud.

ANSWER: the uncanny [or *Das Unheimliche* before mentioned]

4. One member of this genus was used by Chaim Weizmann to produce acetone, n-butanol, and ethanol from starch. One species was formerly known as *welchii*, and is the causative agent of pulpy kidney disease in livestock, as well as the condition known as "tissue gas" in decomposing corpses. Opportunistic proliferation in the bowel with another of its species is the most common cause of antibiotic-associated diarrhea. Members of this genus produce hardy endospores that often give their cells a "tennis racket" appearance. The toxin produced from one of its species inhibits vesicular fusion proteins at neuromuscular junctions, causing paralysis; a purified form of the "A" subtype of this toxin has been commercialized by Allergan for cosmetic uses. For 10 points, name this genus of obligate anaerobe Gram-positive bacteria that includes the species *perfringens*, *difficile*, *tetani*, and *botulinum*.

ANSWER: *Clostridium*

5. The Treaty of Beaufort established this state's northern border. The federal government once operated a mint in this state's city of Dahlonega. After the discovery of precious metals in this state's Lumpkin County sparked a land rush, this state distributed Native American land via the controversial "Gold Lottery." Major Ridge and Elias Boudinot were residents of this US state who controversially sold land to the federal government, over the protest of John Ross. For actions committed in this state, Henry Wirz was hanged as a war criminal, and this state is where Special Order #15 was issued. To combat the spread of activist missionaries, this state banned whites from living on Indian land, a law successfully challenged at the Supreme Court by Samuel Worcester. For 10 points, name this southern state that sparked the Indian Removal controversy.

ANSWER: **Georgia**

6. In latter days, this group became the blue-lanced and white-shielded Aes sidhe. An analog of this band's namesake is the consort of Beli; another progenitor of theirs is Nemed the Scythian. Eventually displaced by the Milesians, this tribe's members had such epithets as Ollathir, Airgetlám, and Lámhfhada. Goibniu, Creidhe, and Luchta are the craftsmen of this group, which used such artifacts as Slane, a magic well, and Gae Assail, a perfect spear. The victors at the battles of Maige Tuired against the Fir Bolg and Fomorians, this group was led by the silver-handed Nuada, until he was killed by Balor and replaced by Lugh. For 10 points, name this people of the goddess Danu, the fifth set of deities to invade mythological Ireland.

ANSWER: the **Tuatha Dé** Danann

7. It's not Libya, but this country's main mountain range has a sub-range called the Jebel Akhdar, or Green Mountain, which was the center of a namesake conflict that erupted in 1954 and 1957. This country's island of Masirah lies off its eastern coast, while a province in this country's south was historically the chief supplier of the world's frankincense and has its capital at Salalah. This country has an exclave on the Musandam Peninsula and its main coastal area is known as Al Batinah, which is bordered to the west and south by the Al Hajar Mountains. The Dhofar region is located in the southern part of this country, which contains parts of the Rub' al Khali and borders its namesake sea to the south. With its northern tip jutting into the Strait of Hormuz, for 10 points, name this country that occupies the southeastern portion of the Arabian Peninsula and has its capital at Muscat.

ANSWER: Sultanate of **Oman**

8. In one novel by this author, a woman studying the composition of suicide notes places a pair of panties into the coat of Desmond Bates to get him to work with her. That novel centers on Desmond's comic treatment of his hearing loss. This author's first novel concerns the relationship between Mark Underwood and Claire, two people who frequent the Brickley Palladium cinema. This author of *Deaf Sentence* and *The Picturegoers* lamented that Colm Toibin's novel *The Master* was published the same year of his novel about Henry James, *Author, Author*. Persse McGarrigle falls in love with Angelica Pabst at first sight in another of his novels, which forms an unofficial trilogy along with *Changing Places* and *Nice Work*. For 10 points, name this contemporary British novelist whose "campus trilogy" includes *Small World*.

ANSWER: David **Lodge**

9. The squared Raleigh distribution is a special case of this function. According to Cochran's theorem this is the distribution of the product of the sample size minus one and the sample variance divided by the population variance. The F distribution can be expressed as the ratio of two instances of this distribution. The sum of squared standard normal variables will be a variable with this distribution. A special case of the gamma distribution with scale parameter two, this distribution is the basis for a test that calculates the test statistic by taking the sum of the squared differences of the observed and expected values and dividing by the expected value; that test is often used to test for goodness of fit, and in particular is used to test frequency deviations from the Hardy-Weinberg Principle. For 10 points, name this statistical distribution that is the basis for a hypothesis test named after Pearson.

ANSWER: **chi-squared** distribution [prompt on **gamma** distribution before it is read]

10. In a 1976, Michael Stocker condemned competing approaches to this theory as “schizophrenic” for failing to examine “motives and motivational structures.” An agent-based variant of this theory that takes inspiration from Frances Hutcheson and James Martineau, among others, was developed by Michael Slote. A book advocating this theory begins by imagining a world in which science has been destroyed and subsequently revived, although it is practiced without true understanding, and argues that this is the situation of one particular branch of philosophy. The development of this theory was largely inspired by G. E. M. Anscombe’s paper “Modern Moral Philosophy,” and it looks back to concepts such as *arete*, *phronesis*, and *eudaimonia*. Advocated by Alisdair MacIntyre, among others, as a neo-Aristotelian approach, for 10 points, identify this theory of moral philosophy which investigates qualities conducive to the “flourishing” of a human being.

ANSWER: virtue ethics

11. Prior to this engagement, one commander gave a speech in which he compared the inevitability of death to the marks left behind by a necklace. The losing side at this battle had been waiting for reinforcements from Al-Kufah, and that side consisted of only 72 soldiers at the beginning of the battle. The victor at this battle was betrayed by Hurr, who cursed the Kufans for blocking access to the river Euphrates. Prior to this battle, the governor of Al-Basrah was sent by Yazid I to warn tribal leaders of reprisal if they fail to keep order among their people. It is reenacted with the performance of ta’ziyyah and is commemorated on the 10th of Muharram. For 10 points, name this battle where Hussein ibn Ali was killed, leading to the split between Sunni and Shiite Muslims.

ANSWER: Battle of Karbala

12. One story by this author sees a “Master of the Arts” marry the daughter of a horticulturalist after he is told he is a genius and one of God’s elect by the title figure, who appears in a whirl of smoke. Another of his stories climaxes with a woman going unpunished after pouring a ladle of boiling water on Lipa’s baby. One of this author’s stories focuses on a coffin-maker who abuses the title character while lamenting the loss of his wife Marfa. That story ends with the title Jew inheriting one of the few objects owned by Yakov Ivanov. This author of “In the Ravine” and “The Black Monk” also wrote a story in which Dmitri Gurov attends a performance of *The Geisha* in the hopes of seeing his lover, a woman he met in Yalta who often walks her small Pomeranian. For 10 points, name this Russian author of “Rothschild’s Fiddle” and “The Lady with the Dog.”

ANSWER: Anton Chekhov

13. Scott Denmark showed that a reagent used in this reaction can be improved by with the substitution of chlorine, while replacing that reagent with a samarium-based reagent results in higher exo/endo diastereoselectivity. In-situ formation of its reagent can be enhanced with ultrasonication. Wittig and others developed a variant of this reaction using diazomethane, and another modification of this reaction is named for Furukawa. When this reaction is performed on Z-substituted allylic alcohols, it proceeds with high diastereoselectivity. Charette’s chiral dioxaborolane ligand is commonly used to achieve an asymmetric version of this reaction. This reaction’s namesake reagent consists of diiodomethane with either diethyl zinc or a zinc-copper couple. For 10 points, name this doubly-eponymous stereospecific reaction in which a carbenoid intermediate reacts with an alkene to form a cyclopropane.

ANSWER: Simmons-Smith reaction [prompt on cyclopropanation]

14. In this man's first appearance, he used twelve yoke of oxen belonging to his father Shaphat to plow a field before slaughtering them to feed the people and burning his own plough to cook the meat. He's not Moses, but this man once struck the Jordan River with another man's cloak, causing it to part. This man cursed his own servant, Gehazi, with leprosy for accepting a payment for a miracle. This man granted fertility to a barren woman in Shunem, later reviving her dead child, and he asked Na'aman to bathe in the Jordan to cure his leprosy. To prevent a widow's children from being sold into slavery, he ordered her to miraculously fill jars of oil and sell them. After some children mocked his baldness, he cursed them and two she-bears mangled them. This man asked to inherit two-thirds of the spirit of his master, whom he saw ascend in a chariot of fire. For 10 points, name this disciple and successor of Elijah.

ANSWER: Elisha

15. During an election year, this publication published an editorial backing a candidate which was purported to be written by Stalin. The appointment of a poet to a chair position at a prominent University led to this publication printing the headline "Would You Let This Man Near Your Daughter?" This newspaper lost a large number of readers in a major city after a report that alleged soccer fans urinating on police and stealing from the dead. That headline was referring to the Hillsborough stadium disaster where Liverpool fans were blamed for interfering with a rescue effort, allegations which were later proved false. This publication printed the headline "Gotcha!" which was seen by many critics as celebrating the deaths of hundreds of enemy soldiers on the General Belgrano during the Falkland Islands War. For 10 points, name this trashy British newspaper owned by Rupert Murdoch, the most widely read newspaper in the United Kingdom.

ANSWER: *The* Sun

16. This author wrote a short story whose narrator is presented with a porcelain figurine that looks like a young version of a girl he once knew, later discovering that she is actually now confined to a wheelchair. Asunta Jordan murders Max Monroy's son Jerico in this author's final novel, which is narrated by the severed head of Josue. Another of his novels uses the phrase "We crossed the river on horseback" many times to represent meaningful transitions of the protagonist. This author of "The Doll Queen" and *Destiny and Desire* used the second person present tense in a novel in which a green-eyed woman transforms into her 109-year old aunt while having sex with a man hired to write the memoirs of a dead general. In another of his novels, Padilla acts as a stand-in for the dead son of a dying mogul. For 10 points, name this Mexican author of *Aura* and *The Death of Artemio Cruz*.

ANSWER: Carlos Fuentes

17. One of the four conserved quantities in this system is known as Carter's constant, after its discoverer. This space's Killing fields consist of two vectors and, extraordinarily, a tensor. The relativistic n-pole moment of this system is given by its mass times the quantity  $i$  times the specific angular momentum to the  $n$ . This is the simplest spacetime containing a region where all time-like paths are co-rotating. The Boyer-Lindquist coordinates for this model give  $\Delta = 0$  and  $\rho = 0$  for its two singularities, one of which is a curvature singularity, which produce a critical surface in the shape of an oblate spheroid. This system allows for the possibility of energy extraction from its ergosphere via the Penrose process. A degenerate case of this model in which the angular momentum is 0 is the Schwarzschild model. For 10 points, name this model that describes the geometry of spacetime around a rotating black hole which, when it is charged, is co-named for Newman.

ANSWER: Kerr-Newman black hole [or Kerr-Newman metric; or Kerr-Newman spacetime; or Kerr-Newman vacuum]

18. In this piece, the pianist's left hand enters in the second measure playing a G minor scale in triplets up to E-flat, then descending staccato quarter notes on D, B-flat, and G. The key of this piece changes from G-minor to C major during the command "Sei ruhig," and six measures later octave C's in the left hand accompany the question "Willst, feiner Knabe, du mit mir gehn?" Earlier in this piece, octave B-flats in the left hand echoed with right hand chords in triplet rhythm accompany the words "Du liebes Kind, komm, geh mit mir!" Near the end of this piece, a half-note A-flat chord is followed by the words "in seinen Armen das Kind war tot." This piece opens with a measure of octave triplet G's in the right hand, which depict a galloping horse upon which a father and son ride. For 10 points, name this *Lied* by Franz Schubert which sets a Goethe poem about the death of a boy at the hands of a very creepy forest spirit.

ANSWER: *Der Erlkönig* [or *The Erl-king*; or *The Elf King*; or *The Alder King*]

19. Following this event, people on the yacht *Ouvea* were arrested, but could not be detained. After this event, the married couple Sophie and Alain Turenge was detained and Charles Hernu resigned. Guilt for this event was eventually admitted by Laurent Fabius. As a result of this event, Fernando Pereira died. This event was planned to prevent interference at the Moruroa nuclear tests. In this event, Christine Cabon planted two mines that would detonate with some delay between them so that the first mine would provide a warning. It occurred in Auckland, New Zealand and was supposedly authorized by Francois Mitterand. For 10 points, name this event in which a Greenpeace ship was sunk by agents of the French government.

ANSWER: sinking of the Rainbow Warrior [accept Operation Satanique; accept equivalents of sinking like attack, scuttling, etc; prompt on stuff involving "Greenpeace"]

20. In one novel partially named for this period of time, Clesant March travels to Tremonta after saving Martin Whitby from falling to his death at a train station. Another novel named for this period of time includes a character who claims that people have to "make the best of it" at a speech during Old Home Week. In a novel with this title, Dr. Merkle receives a brooch as payment for diagnosing the pregnancy caused by the affair of Lucius Harney and Charity Royall--that novel was written by Edith Wharton. A medieval poem about this period of time repeatedly exclaims "Sing cuckoo!" and describes how it "is icumen in." This season's lease "hath all too short a date" according to a sonnet by Shakespeare. For 10 points, name this season, one of whose days is compared to the addressee of Shakespeare's sonnet 18.

ANSWER: summer [or *Arctic Summer*; or "Summer is icumen in"]

TB-21. The central action of this event was an attempt to avoid a vote on the Fansher Amendment, and Leo Amery appealed for a resolution to this event. Part of this event involved a request to appoint Jacques Bureau to the Senate, despite having just resigned for accepting bribes. One figure involved in this event claimed that he said he would not perform a certain action until Arthur Meighen was "first given a chance to show whether or not he is able to govern," and the other namesake politician claimed it as a reason for independence even though he had been the one to request a resolution from London. For 10 points, name this Canadian political crisis of the 1920s that broke out over the Governor-General's refusal to dissolve Parliament.

ANSWER: King-Byng Affair [or *The King-Byng Thing*]

## Bonuses

1. CP symmetry violation was first detected by Cronin and Fitch in 1964. For 10 points each:

[10] The C in CP symmetry is charge conjugation, an operation which changes a particle into this.

ANSWER: its **antiparticle** [or **antimatter**]

[10] The P in CP, on the other hand, stands for this. This operation is equivalent to inverting one of the spatial axes of a system, changing its handedness.

ANSWER: **parity**

[10] According to the standard model, CP symmetry means that at least one of two matrices is complex rather than real. Name either. Their elements are functions of angles and they encode the strength of flavor-changing weak interactions for the two different families of particles subject to such interactions.

ANSWER: **quark mixing** matrix [accept **C**abibbo–**K**obayashi–**M**askawa matrix; prompt on **V**] OR **lepton mixing** matrix [or **neutrino mixing** matrix; accept **P**ontecorvo–**M**aki–**N**akagawa–**S**akata matrix; prompt on **U**]

2. For 10 points each, answer the following about medieval universities in Western Europe.

[10] Before learning the scientific subjects of the Quadrivium, students at medieval universities were first taught these three subjects, which made up the Trivium.

ANSWER: **grammar**, **rhetoric**, and **logic** [accept **grammar**, **rhetoric**, and **dialectic**]

[10] The medieval curriculum was in large part inspired by this late Roman author, who described the seven liberal arts being given as wedding gifts in *On the Marriage of Mercury and Philology*.

ANSWER: **Martianus** Capella

[10] Medieval classes on rhetoric often taught this Roman's dialogue *De Oratore*. He was killed after delivering a series of philippics against Mark Antony.

ANSWER: Marcus Tullius **Cicero**

3. This man's letters to John Calvin eventually resulted in Calvin deciding to arrest him while he was staying in Geneva. For 10 points each:

[10] Name this Protestant theologian, who was put on trial by the henchmen of John Calvin. Obviously, this man lost the trial and was then condemned to death by burning on a stake.

ANSWER: **Michael Servetus**

[10] Michael Servetus was an adherent of this heretical view, which in various forms is held by Arians, Unitarians, and Macedonian heretics. Sir Issac Newton was also an adherent of this view.

ANSWER: **Anti-Trinitarianism** [accept anything about denying the trinity or about **Non-Nicean** or **Anti-Nicean** Christianity]

[10] John Calvin later went on to sign the Consensus Tigurinus with this man, who was the successor of Zwingli as head of the Zurich Church.

ANSWER: Heinrich **Bullinger**

4. He was advised to take Athens during a festival of Zeus, which he interpreted as being the Olympic games. For 10 points each:

[10] Name this man who was killed after a rope tied to the statue of Athena in the Parthenon broke. His death is the first reliably dated event in ancient Greek history.

ANSWER: **Cylon** of Athens

[10] Cylon's death was ordered by this civic leader. A member of the Alcmaeonidae family, he and his descendants were cursed with a miasma for killing Cylon.

ANSWER: **Megacles** of Athens

[10] Megacles served as one of magistrates of ancient Athens. Beginning in the 8th century B.C.E there were three of these positions called eponymous, polemarch, and basileus.

ANSWER: **archon**

5. A building in this city contains a set of four arches that light up in different colors above reflecting pools. For 10 points each:

[10] Identify this city, home to Minoru Yamasaki's Pacific Science Center, and a nearby building with a Sky Church and a monorail that runs through it.

ANSWER: **Seattle**, Washington

[10] One of these buildings in Seattle by Rem Koolhaas features a glass exterior with a steel net. Roland Hinton Perry created the Court of Neptune Fountain for one of these buildings in Washington D.C. that was re-stocked by Thomas Jefferson after the War of 1812.

ANSWER: Public **Library**

[10] Rem Koolhaas designed the so-called "big boxer shorts" building for this city, which has a prominent empty space in the middle of the tower. Other buildings in this city include Paul Andreu's egg-shaped National Center for the Performing Arts.

ANSWER: **Beijing**, China [or **Peking**]

6. In 1995, Ivan Turk discovered this artifact, which was created from a cave bear's femur. For 10 points each:

[10] Name this approximately 43,000 year old artifact excavated from its namesake site in Slovenia. Because of its two spaced holes, many archaeologists believe it was used as a flute, making it the oldest known musical instrument.

ANSWER: **Divje Babe** flute

[10] The Divje Babe flute was probably created by these close relatives of modern humans, who share 99.7 percent of human DNA. They lived in Eurasia until going extinct around 30,000 years ago.

ANSWER: **Neanderthals**

[10] Neanderthals mainly used these stone tools, which they often made using the Levallois technique. These tools included scrapers, and were generally sharper and more refined than earlier Acheulean tools.

ANSWER: **Mousterian** tools

7. In his book *Thick and Thin*, this philosopher attempts to demonstrate the existence of a "minimal morality," which is enriched by various cultures to form their own, distinct morality. For 10 points each:

[10] Identify this author of *Just and Unjust Wars* and *Spheres of Justice*.

ANSWER: Michael **Walzer**

[10] Walzer's approach to morality distinguishes him from philosopher, who deduces and applies ethical rules from general principles of justice understood as fairness. He authored *A Theory of Justice*.

ANSWER: John Bordley **Rawls**

[10] Walzer's approach also distinguishes him from Jurgen Habermas and this man, who developed the "transcendental pragmatics" approach to morality in works such as *Understanding and Explanation*.

ANSWER: Karl-Otto **Apel**

8. This process is commonly described by isotherms, such as the ones named for Henry and Langmuir. For 10 points each:

[10] Name this process in which molecules or particles bind to a surface.

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

[10] This term refers to the type of adsorption in which bonds form between the surface and the adsorbate. It is distinguished from a type of adsorption involving van der Waals forces. This process is often used to generate self-assembled monolayers.

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

[10] This triply eponymous isotherm improves on the Langmuir isotherm because it allows for the possibility of multilayers, although it assumes no interaction between layers.

ANSWER: **BET** isotherm [or **Brunauer-Emmett-Teller** isotherm]

9. This building's namesake altarpiece features an infant Jesus holding a black orb above a small image of the Crucifixion. For 10 points each:

[10] Identify this religious complex also home to the *Tabernacle of the Linaioli* and the *St. Peter of Verona Triptych*.

ANSWER: Church of **San Marco** [or Church of **Saint Mark** or Museo di **San Marco** or Museum of **Saint Mark**]

[10] This Florentine artist of the San Marco Altarpiece showed St. Lawrence in a flame pattern cloak in his *St. Lawrence Distributing the Treasures of the Church*.

ANSWER: **Fra Angelico** [or **Beato Angelico** or **Blessed Angelico** or **Fra Giovanni** da Fiesole or **Guido di Pietro**]

[10] Several of Fra Angelico's versions of this scene were in the *hortus conclusus* style of enclosing the central figure in a garden. One such Fra Angelico version of this scene sees the word of God literally coming from the mouth of Gabriel on its way to Mary.

ANSWER: the **Annunciation** to the Blessed Virgin Mary [or the **Annunciation** of the Lord]

10. At the beginning of the novel named after this character, he puts on a pearl necklace belonging to his much older lover Léa. For 10 points each:

[10] Name this character, whose real name is Fred Peloux. His love for Léa drives him to leave his young wife Edmée.

ANSWER: **Chéri**

[10] This French author of *The Vagabond* created Chéri. She also wrote many novels about the schoolgirl Claudine and the novella *Gigi*.

ANSWER: Sidonie-Gabrielle **Colette**

[10] This fellow French author sent Colette a letter congratulating her for writing *Cheri*. His own novels include *The Pastoral Symphony* and *The Counterfeiters*.

ANSWER: Andre **Gide**

11. They represent some 1 to 2% of the human genome, and contain the information for protein coding. For 10 points each:

[10] These are the sequences that remain in mRNA following splicing.

ANSWER: **exons**

[10] This project from the National Human Genome Research Institute released findings in 2012 concluding that 75% of the genome is transcribed at some point in some cells. It claims that the parts that aren't made of exons harbor regions that regulate the function and level of expression of exons.

ANSWER: **ENCODE** [or **Encyclopedia of DNA Elements**]

[10] One of the ENCODE papers focused on how the functional form of these variations is linked to disease. These segments are widely used to in DNA fingerprinting and consist of just one base pair being changed in the DNA.

ANSWER: **SNPs** [pronounced like snips; or **single nucleotide polymorphisms**]

12. These people's mother goddess was Hannahannah, who is probably cognate to Inanna. Their plague god Jarri is not among the deities they share with the Hurrians. For 10 points each:

[10] Name this thousand-god-having Anatolian civilization.

ANSWER: **Hittites**

[10] This son of Anu and father of Teshub, the storm god, was the chief Hittite deity. The Sumerians identified him with Enlil.

ANSWER: **Kumarbi**

[10] Hittite religious activities seem to have centered on these rocks, which functioned as cult figures to be adored in temples or outdoors. Since the Hittites bragged of their thousands of gods, there are plenty of these to propitiate.

ANSWER: **huwasi** stones



13. This composer was the dedicatee of a *Polonaise* for two pianos by Camille Saint-Saëns and the symphonic prelude *Polonia* by Edward Elgar. For 10 points each:

[10] Name this Polish composer of a symphony in B minor also nicknamed “Polonia.” He also wrote the opera *Manru* and was invited by Steinway to give several triumphant tours of America in the late 19th century.

ANSWER: Ignacy Jan **Paderewski**

[10] Paderewski’s *Polonia Symphony* unusually calls for three sarrusophones, which are relatives of this low double-reed instrument. It plays a high solo at the beginning of *The Rite of Spring*.

ANSWER: **bassoon** [or **Fagotto**]

[10] A Paderewski piano piece with this title is the first of his *Humoresques de concert* and became wildly popular during his American tours. Another piece with this title once attributed to J. S. Bach is now believed to have been written by Christian Petzold.

ANSWER: **Minuet in G** major [prompt on “Minuet”]

14. The co-authors of this document called it a “last will and testament of a dying country.” For 10 points each:

[10] Name this document which after being implemented led to a schism with Prussia allowing for a second Partition of Poland.

ANSWER: **Constitution** of The **Third** of **May**, 1791 [accept any word form that specifies it was passed on the third day of May since it is a translated title]

[10] Polish nobility opposed to the Constitution of the Third of May formed this alliance that allied with Catherine the Great and the Russians in the War in Defense of the Constitution.

ANSWER: **Targowica** Confederation

[10] After the partition of Poland, Prussia created this puppet state centered around a western Polish city, through which Prussia controlled its section of the country.

ANSWER: Grand **Duchy** of **Posen** [or Grand **Duchy** of **Poznan**]

15. The beautiful “Going-to-The-Sun Road” runs through this National Park. For 10 points each:

[10] Name this US National Park, which famously borders the Canadian Waterton Lakes National Park.

ANSWER: **Glacier** National Park

[10] Glacier National Park is found in this US State, nicknamed the “Treasure State” Flathead Lake is the largest lake here and the state capital is Helena.

ANSWER: **Montana**

[10] This sub-range of the Rockies runs along the western border of Montana, separating it from Idaho.

ANSWER: **Bitterroot** Range

16. This short story ends with Eloise abruptly waking up her daughter Romana and then asking asking her friend Mary Jane “I was a nice girl, wasn’t I?” For 10 points each:

[10] Name this short story in which Eloise gets drunk, complains about her husband Lew, and yearns for her old lover Walt. It appears in a collection along with the stories “Down at the Dinghy” and “The Laughing Man.”

ANSWER: **“Uncle Wiggily in Connecticut”**

[10] “Uncle Wiggily in Connecticut” is collected in this author’s *Nine Stories*. He also created the character Seymour Glass.

ANSWER: J(erome) D(avid) **Salinger**

[10] In this novel by W. P. Kinsella, Ray goes on a road trip to meet J. D. Salinger, and takes him back to Iowa after building a magical baseball field on his farm.

ANSWER: **Shoeless Joe**

17. The halting problem was the first problem to be shown to be in this class of problems for Turing machines. For 10 points each:

[10] Name this class of problems that have a yes-or-no answer in principle, even though it is impossible in general to solve them on a given machine.

ANSWER: undecidable problems [accept word forms]

[10] This quantity is the length of the shortest possible program to compute a given number. It is therefore infinite or undefined for non-computable numbers.

ANSWER: the Kolmogorov complexity of the number

[10] This computer scientist's incompleteness theorem effectively shows that there are uncountably many undecidable problems by showing that there is no good way to place an upper bound on the Kolmogorov complexity for a machine able to do arithmetic. His namesake constant is definable but not computable.

ANSWER: Gregory Chaitin

18. This building's namesake altarpiece features an infant Jesus holding a black orb above a small image of the Crucifixion. For 10 points each:

[10] Identify this religious complex also home to the *Tabernacle of the Linaïoli* and the *St. Peter of Verona Triptych*.

ANSWER: Church of San Marco [or Church of Saint Mark or Museo di San Marco or Museum of Saint Mark]

[10] This Florentine artist of the San Marco Altarpiece showed St. Lawrence in a flame pattern cloak in his *St. Lawrence Distributing the Treasures of the Church*.

ANSWER: Fra Angelico [or Beato Angelico or Blessed Angelico or Fra Giovanni da Fiesole or Guido di Pietro]

[10] Several of Fra Angelico's versions of this scene were in the *hortus conclusus* style of enclosing the central figure in a garden. One such Fra Angelico version of this scene sees the word of God literally coming from the mouth of Gabriel on its way to Mary.

ANSWER: the Annunciation to the Blessed Virgin Mary [or the Annunciation of the Lord]

18. This novel's protagonist decides to take a job teaching at a school named for Lord Byron on the Greek island of Phraxos. For 10 points each:

[10] Name this novel in which Nicholas Urfe becomes embroiled in the mind games of Conchis.

ANSWER: *The* Magus

[10] *The Magus* was written by this British author of *The Collector* and *The French Lieutenant's Woman*.

ANSWER: John Fowles

[10] This collection of five short stories by Fowles includes "The Enigma" and "The Cloud." In its title story, the painter Henry Breasley is visited by the critic David Williams.

ANSWER: *The* Ebony Tower

19. In the late 1560s, this kingdom was invaded by nomadic Jaga warriors and only defeated them with help from the Portuguese. For 10 points each:

[10] Name this African kingdom that lends its name to a present day country also known as Zaire.

ANSWER: Kingdom of Kongo

[10] This king of Kongo converted to Christianity, took a Portuguese name, and made Catholicism the official religion of his kingdom.

ANSWER: Alfonso I [or Afonso I or Mvemba Nzinga]

[10] This prophetess in Kongo claimed to speak for St. Anthony and founded Antonianism, a blend of Christianity and traditional local religion. In 1706 the Portuguese burned her as a heretic.

ANSWER: Dona Beatrice [or Kimpa Vita]

20. Raphael Semmes insisted for years that this battle would never have occurred if he had been aware of the iron plating possessed by his opponent. For 10 points each:

[10] Name this Civil War naval battle depicted in a Edouard Manet painting fought just outside of the namesake French harbor, in which the CSS Alabama was sunk.

ANSWER: Battle of **Cherbourg**

[10] This Union sloop-of-war sank the Alabama at the Battle of Cherbourg.

ANSWER: USS **Kearsarge**

[10] This man commanded the Kearsarge. He was later promoted to Admiral and eventually commanded the US Pacific Fleet.

ANSWER: John **Winslow**