

1. The 1970 Bolle Report criticized federal policies regarding the exploitation of this resource in Montana. In 1905, a delegation of British Columbia businessmen from the industry responsible for the processing of this resource met with Wilfred Laurier to demand a tariff on importation of this resource from the U.S. In *Collapse*, Jared Diamond argues that the over-exploitation of this resource eventually resulted in the Easter Islanders being unable to fish, and James I imposed a ban on the use of this resource in glass production, citing wastefulness. A riot over the use of this resource occurred in 1722 in New Hampshire, as some of the highest quality exemplars of this resource had been reserved by Parliament, against colonial wishes, for the production of masts for the Royal Navy. For 10 points, identify this resource formerly commonly used in metallurgy in the form of charcoal and processed in mills.

ANSWER: **wood** or **timber**

2. van Gorp and Palmen gave one approach for verifying whether this principle holds by plotting the phase angle versus the absolute value of the complex shear modulus. An equation used with this principle can be derived from the Doolittle equation. The log of one factor used in this technique can be found with that derived equation, the WLF equation. That factor is a-sub-capital T, the horizontal shift factor, which is used with the vertical shift factor to generate a "master curve" in this technique. With the Boltzmann principle, it is important in predicting creep behavior. For 10 points, identify this technique used to describe the viscoelastic behavior of linear polymers over a broad range of time.

ANSWER: **time-temperature superposition** principle/method [or **TTSP**; or **time-temperature correspondence**; or **frequency-temperature superposition** principle/method; or the **method of reduced variables**]

3. Paul Hindemith wrote a sonata for four of these instruments a capella, the last movement of which is a set of variations on a folk song about this instrument. One solo for this instrument is the "Elmira" theme in Shostakovich's 10th symphony. Besides the piano and violin, Mozart wrote more concertos for this instrument than any other; those four pieces are dedicated to Joseph Leutgeb, and three of them are in E-flat major. Another E-flat major work featuring this instrument pairs it with violin and piano; that trio named for this instrument is by Brahms. It's not a clarinet, but a solo for this instrument in *Till Eulenspiegel's Merry Pranks* begins C-F-G-G#-A, and ends on a concert F2. Several twentieth-century concertos for this instrument were written for Dennis Brain. "Hand-stopping" this instrument can be indicated in a score by the word "bouché". For 10 points, name this brass instrument, three of which represent the second title character in *Peter and the Wolf*.

ANSWER: French **horn**

4. During this period, the equation of state is given as the pressure being equal to one-third of the density, which itself scales as the fourth power of the temperature. Small-scale matter perturbation modes cross the horizon during this period. For a flat universe, the deceleration parameter during this time period is equal to one. The energy term which characterizes this period achieves equality with the matter term at around 10 to the 4th years, and during this period the entire universe was in thermal equilibrium. After the end of this period, the energy density of the universe is dominated by baryons and dark matter. For 10 points, identify this time period of the early universe immediately following inflation, during which the energy density was dominated by relativistic particles and photons and the universe was completely ionized.

ANSWER: **radiation** era [accept **thermal** epoch or **plasma** era]

5. The last section of this work concludes with the remark that its vision of the "good" society resembles that of the Enlightenment philosophers, and that the ideal is approached when the recognition that "man's reason is slave to his passion," leads to improved organization. The sixth chapter of this work introduces the "external-costs function," and the "decision-making-costs function," and one of the arguments of this work is that if side-payments are allowed, the results will be Pareto-optimal for any decision-making rule for collective action. This work begins by claiming to give a theory of "what we *think* the State ought to be," and argues for a "methodologically individualistic" model for analyzing collective behavior. Its third part is an application of game theory to voting structures, such as unanimity and majority rule, and its third chapter is an attempt to reconcile political theory's emphasis on "public interest" with economic behavior. For 10 points, identify this seminal work of public choice theory, written by Gordon Tullock and James Buchanan.

ANSWER: The **Calculus of Consent**: Logical Foundations of Constitutional Democracy

6. In one incident related in this work, such a great number of people come to see the main character that they trample a grapevine, which nevertheless proceeds to give more wine than usual. Another section of this work tells of a knight named Landulph who converses with a devil that had possessed a woman; that devil tells Landulph that he had temporarily stopped his possession in order to go dispute with the main character of this work on his deathbed. A story told in this work concerns the main character's explanation to Brother Leo as to what would constitute perfect joy, while another story tells of how, just before dying, the main character chooses not Brother Elias but Brother Bernard as the head of the order founded by the main character. This work contains a section devoted to the "Five Considerations" of its main character's stigmata, the existence of which is disbelieved by the knight Jerome until he has a chance to touch them alongside St. Clare, who helps bury this work's main character. For 10 points, identify this collection of legends about the life of St. Francis of Assisi.

ANSWER: **Fioretti** or **Little Flowers** of Francis of Assisi

7. In the fifth scene of this play, two characters have an argument over whether Marx said "Don't the ends justify the means?" The title character of this work teases a female character as "a boy... with lipstick on," but later declares his love for her after she delivers him some apparently good news. This work's title character is first encountered torturing a marijuana dealer named James Hanley and later engages in a shootout with members of a "splinter group," killing Brendan and Joey. The action of this play opens with Donny and Davey debating what to do about the fact that Davey has just run over the cat Wee Thomas with his bicycle. The death of Wee Thomas enrages the title character, who proceeds to torture Christie before being shot by his fiancée Mairead for killing her own cat, Sir Roger. For 10 points, identify this play whose title character, Padraic Osbourne, occupies the titular rank in the Irish National Liberation Army, written by Martin McDonagh.

ANSWER: The **Lieutenant of Innishmore**

8. This event was preceded by the killing of Robert de Comines, and in exchange for assistance during this event, Ilbert de Lacy was granted the land that would later become Pontefract castle. Prior to this event, a city being held by William Malet and Gilbert de Grant was captured by a force bolstered by Danes under the command of the sons of Sweyn II, who would later be bought off with tribute by the perpetrator of this event. This event caused Bishop Ethelwine to withdraw his clerical community to Lindisfarne, and according to Orderic Vitalis, more than 100,000 people died of starvation during this event, which affected the area between York and Durham. Prompted by a Northumbrian revolt in support of Edgar Aetheling, for 10 points, identify this scorched-earth campaign of punishment carried out in the eponymous part of England in 1069 and 1070 by William the Conqueror.

ANSWER: the **Harrying of the North**

9. One part of this poem addresses a vulture, and asks "When you come for the white rat that the foxes left/ Take off the red helmet of your head, the black Wings that have shadowed me, and step to me as man." This poem's narrator bemoans a "dull null Navy I wear to work, and wear from work, and so/ To bed, so to my grave," with no complaints from either the Deputy Chief assistant or his chief. Comparing herself to "beings trapped," in the title location, "as I am trapped," the narrator of this poem cries, "O bars of my own body, open, open!" and ends this poem asking the vulture, "You know what I was/ You see what I am: change me, change me!" Titling a 1960 collection of poems by its author, for 10 points, identify this poem whose female narrator sees "the saris go by me from the embassies," near the title locale, written by Randall Jarrell.

ANSWER: The **Woman at the Washington Zoo**

10. One painting by this artist depicts the title winged creature with its paw resting on a book opened to face the viewer; that painting, set against a Venetian background, is this artist's *The Lion of St. Mark*. This artist's series for the Scuola di San Giorgio degli Schiavoni depicts episodes in the life of St. Jerome, St. Trifon, and of course St. George, the latter of whom is depicted baptizing the Selenites in one panel. The subject of this artist's most famous series is depicted sleeping in a canopied bed on the left as an angel enters from the right bearing news of her martyrdom in one work, and also depicted the title figures being glorified at the top of the title landmark in his monumental *The Crucifixion and Glorification of 10,000 Martyrs on Mt. Ararat*. This artist's most famous work was inspired by the *Golden Legend* of Jacopo da Varagine, and consists of a set of nine large paintings which tell the story of a Christian saint martyred by Attila the Hun along with 10,000 virgins. For 10 points, identify this Venetian Renaissance painter best known for his series of the life and martyrdom of St. Ursula.

ANSWER: Vittore **Carpaccio**

11. The final portion of this work describes a system of confessions in which ordinary people confess their sins to magistrates, who confess to "the three supreme chiefs," who themselves confess to a priest named Hoh. When asked to discourse upon military affairs in the title location, one speaker in this work explains that women are also trained to be soldiers, and that inhabitants of the title location do not fear death because they believe that the soul is immortal. The title location of this work is said to be ruled by the triumvirate of personified Power, Love, and Wisdom, and is divided into seven rings named for the seven planets, with four gates aligned with the four cardinal directions. The character telling of this place recalls being conducted there after finding himself "on a large plain immediately under the equator." Framed as a dialogue between the Grandmaster of the Knights Hospitallers and a "Geonese sea-captain," for 10 points, identify this philosophical work describing the title utopian locale, the masterpiece of Tommaso Campanella.

ANSWER: The **City of the Sun** or La **citta del Sole** or **Civitas Solis**

12. In collaboration with the painter Alfred Leslie, this artist directed the film *Pull My Daisy*. A 2000 retrospective of this artist was titled *Hold Still - Keep Moving*, and this artist's *The Lines of My Hand* contains a series of Polaroids as a tribute to the artist's daughter Andrea, who died in an airplane crash. One work by this artist depicts a man in a cowboy hat and boots leaning against a trash can in New York City. This artist's most famous collection, made possible by a Guggenheim grant, was first exhibited by Hugh Edwards in 1961 at the Art Institute of Chicago, and contains an introduction written by Kerouac. That collection by this artist opens with an image of two people looking out the windows at the title event while an American flag streams across the top, and also contains a photograph of black men in fedoras standing next to their cars; those photographs are titled, respectively, *Parade - Hoboken, New Jersey* and *Funeral - St. Helena, South Carolina*. For 10 points, identify this Swiss-born photographer best known for

his 1958 collection, *The Americans*.

ANSWER: Robert **Frank**

13. After visiting a prostitute at Mrs. Paradise's brothel, the narrator of this novel becomes obsessed with decorating the prostitute's vagina with flowers. At the Hotel Tichota, this novel's narrator makes acquaintance with the poet Tonda Jodl, who has authored a self-published book titled *The Life of Jesus Christ*. In this novel, a complicated plan to bless a golden statue of the Infant Jesus results in a Bolivian delegation making off with the statue, and this work's narrator frequently brags about a medal with a blue sash given to him by Haile Selassie. This novel's narrator, Ditie, marries a Nazi athlete at the outbreak of World War II, and is eventually thrown into prison by the Soviets who nationalize the hotel he opens after the war. For 10 points, identify this novel whose title refers to the reply given to the narrator's question of how he knows what to do by the headwaiter Mr. Skrivanek, a work by Bohumil Hrabal.

ANSWER: **I Served the King of England**

14. An example of these regions found on chromosome 16 is PV92, and they are descendants of a dimer of FRAM and FLAM. These regions have eight subfamilies: Jo, Jb, Sx, Sz, Sc, Sq, Sp and Y. Adenosine to inosine RNA editing, performed by the ADAR family, is most common where they occur. These regions are thought to derive from 7SL RNA. They are transcribed by RNA polymerase III and then integrated into the genome by the reverse transcriptase of LINE-1. These primate specific repeats are a prominent example of short interspersed elements. For 10 points, identify these most common transposons in humans.

ANSWER: **Alu** elements [or obvious equivalents for "elements", such as "sequences" or "repeats"; prompt on **repeats**; prompt on **SINEs**; prompt on **short interspersed elements**; prompt on retro**transposons**; prompt on Class I **mobile** genetic **elements**]

15. One innovation developed by this organization was only approved for a patent after a long struggle with the Baron von Roon, who opposed that innovation's use. Many innovations developed by this organization were tested at Meppen, where one head of this organization organized the Volksschiessen event. This organization became involved in the business for which it is best known in the early 19th century when its head Friedrich founded the Gusstahlfabrik, and that involvement continued under Friedrich's son Alfred, who prospered due to his contacts with Wilhelm I. This organization was responsible for the creation of a mostly-useless object with a meter-wide muzzle called the Big Gustav, though perhaps its most famous creation was the 42 centimeter caliber mortar deployed during the siege of Liege and named Big Bertha after its baroness head. For 10 points, identify this company which provided much of the armaments for Prussia, the First Reich, and Hitler's regime, which takes its name from the family that founded it.

ANSWER: **Krupp**

16. In several articles written for the New York Review of Books, this writer castigated the World Psychiatric Association for refusing to confront Soviet abuses of psychiatry. In one essay, this man argued that "a society which regards it as proper in an economic crisis to throw men out of work at once but shameful to default on a bond," would find itself "necessarily handicapped in.. mobilizing for war;" that essay became part of this man's book on the ways in which business was undermining the war effort, titled *Business as Usual*. After accompanying Jews who were attempting to illegally enter the British Mandate, this man wrote about that experience in a book dedicated to the Haganah titled *Underground to Palestine*. One of this man's most famous dispatches, published in his subscription-only newsletter, challenged the official account of the Tonkin Gulf incident, while another claimed that "Only the Bums Can Save the Country Now," in reporting on the Kent State massacre. For 10 points, identify this

investigative journalist, most famous for his eponymous *Weekly* published from 1953 until 1971.

ANSWER: Israel **Feinstein Stone** [accept either name]

17. Writing in the aftermath of this action, security analyst Shai Freedman argued that this action could cause its perpetrators to be perceived as “crazy,” and concluded that it “did not produce a clearly favorable balance sheet.” Dan Reiter and Richard Betts have both asserted that this action was actually counterproductive, since it forced a shift from publicly known efforts to secret ones, and in response to this action, Sigvard Eklund declared that this action was also detrimental to the safeguards instituted by the organization Eklund headed. This action was preceded by a refusal several years earlier of one country to switch to the “Caramel” fuel, rather than use 92 percent enriched fuel, and it resulted in the destruction of two structures called Tammuz-I and Tammuz-II. Carried out by a squadron of F-16s taking off from Etzion in the Negev under the auspices of Operation Opera, for 10 points, identify this 1981 Menachem Begin-ordered attack on a scientific installation by the Israeli air force, ostensibly to prevent Saddam Hussein’s Iraq from developing nuclear weapons.

ANSWER: the **bombing** of the **Osirak** reactor [accept anything that talks about the destruction of the Osirak reactor; “Osirak” is required, so keep prompting if they say “nuclear reactor. Accept **Operation Opera** or **Operation Babylon** before mention]

18. The major work that describes the categories of these concepts distinguishes between those of them which originate from incidental characteristics, and the *sann* variety, which originate from essences. These concepts are divided into the simple, *tvikent*, or “double,” and *rekit*, or “extended,” variants in a text partially concerned with these concepts titled the *Hattatal*. A more famous text describing these distinguishes them from *heiti*, or synonyms. That work is framed as a conversation between Aegir, who asks about the origins of these concepts and their classification, and Bragi, who explains their origin and proceeds to list many examples of these concepts, such as those relating to fire, gold, and Heimdall. Classified in a chapter of the Prose Edda called the *Skaldskaparmal* and including examples such as “all-father” for Odin, for 10 points, identify these devices of skaldic poetry, a kind of circumlocutory reference.

ANSWER: **kennings**

19. After being accused of running a private prison, the title character of this work becomes the target of a revolt led by a barber nicknamed “Stewed Corn.” That barber, whose real name is Porfirio, eventually compromises with the title character, which leads to Porfirio’s deposition as Protector by another barber, Joao Pina. The title character formulates a theory that requires him to first lock up all those who exhibit disequilibrium, including his friend the druggist Crispim Soares, but later decides that it is perfect equilibrium which demands confinement. The title character founds an insane asylum known as the Green House in the city of Itagui, and at the end of this story, moves into it in order to self-analyze and cure himself, dying 17 months later. For 10 points, identify this story about the titular scientist Simao Bacamarte, written by Machado de Assis.

ANSWER: The **Psychiatrist**

20. Tipping and Bishop developed a probabilistic version of this technique, which works by marginalizing over a continuous latent space in which for each data point there is a corresponding latent variable. A canonical way of carrying out this technique is to compute the singular value decomposition of the data matrix, the columns of which yield the vectors sought by this technique. The application of this technique to time series is called the empirical orthogonal function method, and this technique involves the diagonalization of the covariance matrix to find the  $n$  eigenvectors corresponding to the  $n$  largest eigenvalues. For 10 points, identify this dimensionality reduction technique in which data is projected

onto a lower-dimensional linear space such that the variance of the projected data is maximized.  
ANSWER: **principal component analysis** or **PCA**

1. Spectral karyotyping uses a multicolor variation on this process. For 10 points each:

[10] Identify this cytogenetic technique that uses a fluorescently tagged probe with a complementary sequence to some DNA on a target gene.

ANSWER: **FISH** [or **fluorescence in situ hybridization**]

[10] This is the most common method of labeling DNA for FISH. It uses a DNase to break a strand of DNA and DNA polymerase removes exposed nucleotides and replaces them with labeled ones.

ANSWER: **nick translation**

[10] Another common way to label DNA for FISH is to use this technique or its degenerate oligonucleotide-primed version. This technique almost always uses a certain enzyme isolated from *Thermus aquaticus*.

ANSWER: **PCR** [or **polymerase chain reaction**]

2. The Ludlow Amendment was a failed proposal to change the Constitution to subject all declarations of war to this process. For 10 points each:

[10] Identify this process in which a law originating in the legislature is subject to a direct vote by the populace, as opposed to the initiative, in which the law originates from the vote.

ANSWER: **referendum**

[10] In 1898, this state became the first to make the initiative and referendum process part of its constitution.

ANSWER: **South Dakota**

[10] The progressive package of initiative, referendum, and recall, is sometimes known as this sort of "system," named after the state in which William U'Ren pioneered its use through his Direct Legislation League.

ANSWER: **Oregon** System

3. The most common way of commercially producing these types of devices is the bulk micromachining method, which can be either wet etch or dry etch. For 10 points each:

[10] Identify this class of devices, typically used as sensors or actuators on a very small scale.

ANSWER: **MEMS** or **micro-electromechanical systems**

[10] Due to their high surface area-to-volume ratio, MEMS devices are prone to breakage as a result of being unable to overcome this binding force, which results from the adhesion of two smooth surfaces in close contact.

ANSWER: high **static friction** or **stiction**

[10] Another method of MEMS manufacture relies on this phenomenon, in which a lattice mismatch between an epitaxial growth layer and its substrate results in a strain that drives the Stranski-Krastanow mode of growth of regularly shaped objects.

ANSWER: **self-assembly**

4. This conflict arose after the MacMahon lordship was reorganized into the county of Monaghan, which threatened the traditional privileges of this rebellion's leader. For 10 points each:

[10] Identify this Irish rebellion of 1593 against the English crown. It was eventually defeated by Lord Mountjoy, and is known either by the name of its duration, or by the name of its leader.

ANSWER: **Nine Years' War** [accept **Tyrone's** Rebellion if given but do not read that alternate answer]

[10] During the Nine Years' War, the Irish forces were led by this man, who later surrendered to Mountjoy and eventually fled England for the continent during the Flight of the Earls.

ANSWER: Hugh **O'Neill**, earl of **Tyrone** [accept either answer]

[10] In addition to the excellently named battle of the Ford of the Biscuits, the war also included this victory by O'Neill over the English forces commanded by Sir Henry Bagenal. It was the largest victory of Irish over English forces ever.

ANSWER: Battle of **Yellow Ford**

5. Members of this religious tradition observe the Fast of Jonah, and its laity is given voice in the Majlis Mili. For 10 points each:

[10] Identify this religious tradition which stems from the teachings of Dioscorus and the Tome of Leo.

ANSWER: **Coptic Church**

[10] This Coptic Church rejects the doctrine of the double procession of the Spirit from the Father and the Son, referred to in the Nicene Creed by this Latin word.

ANSWER: **filioque**

[10] This divine being holds a special place in Coptic theology, as indicated the *Book of Investiture* of this being, who has a feast day on November 21st.

ANSWER: the Archangel **Michael**

6. Following the death of Eldon, his position in the service of Mrs. Tennant is assumed by Charley Raunce. For 10 points each:

[10] Identify this novel, which concludes with Raunce and the maid Edith leaving Mrs. Tennant's employ without giving notice to get married.

ANSWER: **Loving**

[10] Like its sequels, *Living* and *Party Going*, *Loving* was written by this British author.

ANSWER: Henry **Green** or Henry Vincent **Yorke**

[10] Green is generally acknowledged as one of the masters of the British "conversational novel" along with this author of *A Heritage and Its History* and *Pastors and Masters*.

ANSWER: Ivy **Compton-Burnett**

7. One work by this man was written for Georges Barrère, in honour of the first-ever platinum flute. For 10 points each:

[10] Name this composer of *Density 21.5*, who also featured the flute in his septet *Octandre*.

ANSWER: Edgar **Varèse**

[10] This Varèse work for thirteen percussionists calls for such instruments as guiros, sleigh bells, and sirens. Piano and celesta also make an appearance, but Varèse does without pitched instruments until the very end of the piece.

ANSWER: **Ionisation**

[10] This orchestral work by Varèse is titled after a quote from Paracelsus. It is based on an eleven-note *idée fixe* consisting of the repeated notes A, B-flat, C, which is brought back and varied *passacaglia*-style throughout.

ANSWER: **Arcana**

8. The third chapter of this work argues that the mature form of the title concept is characterized by the abandonment of an egocentric attitude. For 10 points each:

[10] Identify this short psychological work, based on a set of Merrick Lectures, which the author introduced as a specialized extension of his work *Personality: A Psychological Interpretation*.

ANSWER: The **Individual and His Religion**

[10] This American psychologist wrote *The Individual and His Religion*. His other works include *Pattern and Growth in Personality*.



ANSWER: Gordon Willard **Allport**

[10] Allport is perhaps best known for this work, which argued that the title phenomenon consisted of an attitude and an overgeneralized belief, and stemmed from the human tendency to divide others into groups.

ANSWER: The **Nature of Prejudice**

9. In this novelist's most famous work, the title character, a 150-year old man sees a vision in a mangrove tree which tells him that the white men will eventually own his land. For 10 points each:

[10] Identify this author, who created the titular *Don Goyo* and wrote of the struggles between Father Candido and Colonel Marisca in his best known novel, *Seven Serpents and Seven Moons*.

ANSWER: Demetrio **Aguilera Malta**

[10] Demetrio Aguilera Malta is the most famous writer from this South American country, where he was part of a group of writers called the Guayaquil Group.

ANSWER: **Ecuador**

[10] In Aguilera Malta's most famous play, the peasant Zambo Aguayo is chased by one of these creatures, which eventually kills him. Bustrofedon is a character in a Guillermo Cabrera Infante novel set in the Tropicana Nightclub and named for some of these creatures.

ANSWER: **tigers**

10. Originally born Li Shimin, this emperor rose to power after his father, Li Yuan, rebelled against the Sui emperor Yangdi. For 10 points each:

[10] Identify this second Tang emperor, who in 626 C.E. succeeded his father, who had become the Gaozu emperor.

ANSWER: Tang **Taizong**

[10] One Taizong's major domestic achievements was the establishment of this process, whereby those seeking positions in the imperial bureaucracy had to answer questions based on the Confucian classics.

ANSWER: **civil service examinations** [accept reasonable equivalents]

[10] Taizong's reforms spread to many other neighboring countries; one example was this 645 C.E. series of reforms in Japan in which a Chinese-style government, tax system, and law code were adopted.

ANSWER: **Taika** reforms

11. This technique consists of rewriting the sought-after function, usually a potential, as a sum of a function of the angular coordinates times powers of inverse distance. For 10 points each:

[10] Identify this technique commonly used in electrodynamics.

ANSWER: **multipole** expansion

[10] These are the functions of angular coordinates typically used in the multipole expansion. They arise naturally as the solutions to the angular part of the separable Laplace equation.

ANSWER: **spherical harmonics**

[10] The electric and magnetic multipole fields are the spherical analogues of these cylindrical modes in waveguides, which are determined by the fact that the dot product of either the electric or magnetic field with the radius is zero.

ANSWER: **transverse** electric or magnetic modes

12. This work's second part, dedicated to empirical analysis, examines the rates of return from a college education, while its first, theoretical part, focuses partly on the incentives that companies have to invest in things like on-the-job training. For 10 points each:

[10] Identify this 1964 economic work.

ANSWER: **Human Capital**: A Theoretical and Empirical Analysis, with Special Reference to Education

[10] *Human Capital* is one of the first major works of this University of Chicago economist, who won the Nobel Prize partly for his studies of human capital.

ANSWER: Gary Stanley **Becker**

[10] Becker's first work was an application of economics to this practice; Becker argued that if an individual has a "taste" for this practice, then he must "act as if he were willing to pay something" to engage in it. To index just how much that is, Becker developed the DC factor.

ANSWER: **discrimination**

13. This object was possessed by Conall, who obtained it after killing the king of Leinster and cutting off his head, which he then found impossible to lift. For 10 points each:

[10] Identify this object which was eventually stolen by Cet, and used to fulfill the prophecy that the king of Leinster would have his revenge after death.

ANSWER: **brain** ball of Mesgegra

[10] The brain ball of Mesgegra was used to kill this high king of Ulster, and noted pursuer of Deirdre, when it was used as a shot in a sling. The ball lodged there until, as later Christian legend has it, this king heard about the death of Christ and got so angry that his wound burst and he died.

ANSWER: **Conchobar** mac Nessa

[10] The conflict over Deirdre and the murder of Noisiu by Conchobar drove this man, Conchobar's stepfather, into an allegiance with Medb. He died when Lugaidh, a warrior in the service of Ailil, Medb's husband, killed him after Ailil became jealous.

ANSWER: **Fergus** mac Roich

14. Modern catalysts used for this reaction include DABCO and DMAP. For 10 points each:

[10] Identify this powerful carbon-carbon bond-forming reaction in which an aldehyde and an electron-deficient alkene are condensed in the presence of a nucleophilic catalyst like a tertiary amine or phosphine.

ANSWER: Morita-**Baylis-Hillman** reaction [or **MBH** reaction]

[10] The aza modification of the MBH reaction uses this functional group in place of an aldehyde. Also known as a Schiff base, they are basically carbonyls that have a nitrogen and side chain in place of oxygen.

ANSWER: **imines**

[10] The first step in this four-component condensation of an aldehyde, an amine, a carboxylic acid, and an isocyanide is the formation of an imine. This reaction produces alpha-acylamino amide derivatives and is normally paired with the Passerini reaction.

ANSWER: **Ugi** reaction

15. The artist of this painting designed the frame which surrounds it; that frame depicts a radiant eye on a pyramid at the bottom, and five cherubs looking from the top down onto the scene of the painting. For 10 points each:

[10] Identify this painting which depicts the setting sun illuminating the title objects, which was intended for the Tetschen altar.

ANSWER: The **Cross in the Mountains**

[10] *The Cross in the Mountains* is probably the most famous religious work of this Romantic painter, famous for his nature scenes such as *The Polar Sea*.

ANSWER: Caspar David **Friedrich**

[10] Colonel Friedrich Gotthard von Brincken was the model for this Friedrich painting, which depicts its subject standing on a rocky outcropping with his back to the viewer and looking down on the poorly visible landscape below.

ANSWER: **Wanderer** above the **Sea of Fog** [accept anything containing “wanderer” and “fog” or “mist”]

16. This sculpture, like 14 others completed by the artist from 1945 to 1948, is held together by interlocking notches. For 10 points each:

[10] Identify this sculpture made from pink marble, which is owned by the Metropolitan in New York. It takes its name from a type of ancient Greek sculpture depicting male nudes.

ANSWER: **Kouros** [do not accept “Kouroi”]

[10] *Kouros* is an example of the biomorphic art of this Japanese-American sculptor.

ANSWER: Izamu **Noguchi**

[10] Noguchi collaborated with this architect on a design for the never-realized Adele Rosenwald Levy playground in New York. This architect is best known for designing the National Assembly building in Dhaka, as well as the Salk Institute in San Diego.

ANSWER: Louis **Kahn** or Itze-Lieb **Schmuidowsky**

17. Despite the best efforts of Riviere in this novel, Fabien’s plane is lost in the storm that covers most of the Buenos Aires area. For 10 points each:

[10] Identify this novel, which ends with Riviere hoping that the title ventures will not be canceled.

ANSWER: **Night Flight** or **Vol de nuit**

[10] In this first novel by the author of *Night Flight*, Jacques Bernis dies in the Rio de Oro desert while making the title delivery.

ANSWER: **Southern Mail** or **Courier sud**

[10] This French novelist and aviation pioneer wrote the novels *Southern Mail* and *Night Flight*, and recounted his own piloting experiences in his autobiography *Wind, Sand, and Stars*.

ANSWER: Antoine Jeane-Baptiste Marie Roger de **Saint-Exupery**

18. As member of the Reichstag, this man cooperated with the Independent Socialists to oppose German entry into World War I, and was frequently in conflict with his more dogmatic counterpart, Karl Kautsky. For 10 points each:

[10] Identify this politician and socialist theorist, best known for his idea of evolutionary socialism, which he opposed to violent revolution.

ANSWER: Eduard **Bernstein**

[10] Bernstein was a prominent member of this political party, which grew out of the merger between the General German Workers’ Association and a similarly named Worker’s Party.

ANSWER: **SPD** or the **Social Democratic** Party or **Sozialdemokratische Partei Deutschlands**

[10] The SPD was co-founded by this German socialist, who helped fold the Saxon People’s Party into the SPD and fought with Bernstein over the latter’s revisionist socialism.

ANSWER: August **Bebel**

19. The main character’s plan goes awry when Ben Woodfolk reveals its details to Mosley Shepherd. For 10 points each:

[10] Identify this novel which ends with the hanging of Dichter and General John, together with their co-conspirator, Gabriel.

ANSWER: **Black Thunder**

[10] This writer of the Harlem Renaissance, who wrote about the jockey Little Augie in *God Sends Sunday* is the author of *Black Thunder*.

ANSWER: Arna Wendell **Bontemps**

[10] At the end of this short story by Bontemps, the sharecropper Jeff Patton drives the car containing him and his wife Jennie into the Mississippi.

ANSWER: A **Summer Tragedy**

20. In order to elucidate the usefulness of the title concept, this work borrows Robert Nozick's thought experiment about a Martian observing a stockbroker buy shares of GM. For 10 points each:

[10] Identify this work, which argues that the title strategy operates on a fundamental rule of attributing to a system those beliefs it ought to have.

ANSWER: The **Intentional Stance**

[10] *The Intentional Stance* was written by this philosopher, who explored the philosophical implications of evolution in *Darwin's Dangerous Idea*.

ANSWER: Daniel **Dennett**

[10] In *The Intentional Stance*, Dennett argues that folk science is connected to this concept. This concept was formulated by Wilfrid Sellars as "the framework in terms of which man came to be aware of himself as man-in-the-world" and contrasted with the "scientific image."

ANSWER: **manifest** image