1. Near the end of his life, he formed an alliance with Lotharingia and won a battle at Visé. He imprisoned Magnus of Saxony to quell a revolt there, and earlier, he received a letter reminding him what happened to Saul, over the question of (*) investing an anti-Patarine archbishop of Milan in 1073. For 10 points— name this emperor who "went to Canossa" to beg forgiveness from Pope Gregory VII.

answer: Henry IV

2. The title character carries an unread copy of Don Quixote in his saddlebag and is killed for burning some meaningless land deeds. In this novel, Tomás (*) Arroyo succeeds in getting onto the Mirandas' property by fooling Harriet Winslow, as the title character arrives looking for Pancho Villa. For 10 points— name this Carlos Fuentes novel about the possible Mexican death of Ambrose Bierce.

answer: The Old Gringo or El gringo viejo

3. This language uses the "ssa" ending to mark the incessive case, and it involves a change from one stop sound to another when stops occur before closed syllables. This language of consonant gradation saw its first Bible translation done by Mikael Agricola. Sharing a language branch with Veps, Ingrian, and (*) Karelian, this is, for 10 points— what tongue of Frans Sillanpää and Jean Sibelius?

answer: Finnish or Suomi

4. Lord Darcy was executed on suspicion of sympathizing with this movement, which was put down by Thomas Howard, the Duke of Norfolk. Starting in Louth, this uprising was led by (*) Robert Aske from Yorkshire, and it targeted not only religious change but also enclosure. For 10 points— name this 1536 peasant action against England's Reformation, a challenge to the rule of Henry VIII.

answer: the Pilgrimage of Grace

5. This reaction makes tertiary alcohols from substituted fluoroolefins, and when combined with NMO-TPAP oxidation can make carbonyls from olefins. One product of this reaction can be used in Suzuki coupling, while the other is the (*) anti-Markovnikov product. For 10 points— name this reaction that makes alcohols from alkenes using a compound containing a noted fifth element.

answer: hydroboration
6. In February 2008, he joined John Kerry and Chuck Hagel on a mission to India to campaign for a nuclear treaty. This advocate of a partitioned, federal Iraq was first elected to the Senate at age 30, and will be running for a (*) seventh term this year. His 1988 Presidential run was derailed by plagiarism, and this Foreign Relations Committee chairman dropped out in 2008. For 10 points— name this Delaware Democrat.

answer: Joe Biden

7. The protagonist of one of his novels loses his girlfriend to someone who gives her a silver plate, and he also wrote about a painter who has his best friend executed during the Jacobin terror. In addition to *At the Sign of the Reine Pedaque and The* (*Gods are Athirst*, he wrote of the couple Kraken and Oberosia, who turn into humans when they are baptised by Mael. For 10 points— name this author of *Penguin Island*.

answer: Anatole France

8. In this country, the beheading of reporter Heorhiy Gongadze was linked to former president (*). Leonid Kuchma. Its current prime minister Yulia Tymoshenko no longer sees eye-to-eye with president Viktor Yushchenko, though they stood together in 2004's Orange Revolution. For 10 points— name this country where dioxin poisoning and weeklong protests marked that event.

answer: Ukraine

9. A kind of this which uses black seeds blended with wine and tarragon is known as Bordeaux. Pommery makes a noted whole-grain type of this item, while the English brand Colman's is a powdered variety that can be used in homemade sauces. (*) Sausages take the Dusseldorf kind, and a variant on Bordeaux that husks the seeds is called Dijon. For 10 points— name this condiment with brown and yellow varieties.

answer: mustard

10. He defeated Bhadalasa to end the Nanda Dynasty, and a legend about this man says that he was born virtually a slave, who was forced to go with a buyer to Taxila, where he met (*Alexander the Great*) and got licked by a lion in his sleep. He incorporated Magadha and Punjab into his new kingdom and fought off a Seleucid invasion, while consulting the Artathastra before fasting to death. For 10 points— name this Mauryan founder.

answer: Chandragupta Maurya

11. Their namesake characteristic is the number of times one must add the multiplicative identity to itself to get zero. Their extensions are formed when the solution to a polynomial equation is added to them. Their axioms make them a (*) commutative division algebra. For 10 points— identify these algebraic structures which satisfy the group axioms and have a commutative multiplication operation with an inverse.

answer: fields

12. A Soviet comissar falls in love with an American heiress on a ship in his *Between Two Worlds*, and this man also wrote a play in which Frank kills (*) two people and Harry Easter is the doting boss of Rose Maurrant. In another of his plays, Daisy Diana Dorothea Devore constantly yells numbers to Mr. Zero. For 10 points— name this author of *Street Scene* and *The Adding Machine*.

answer: Elmer Rice

13. Three kneeling and bowing figures in white are in front of an altar dominated by huge golden trees in this artist's *The Sacred Wood*. An angry, brown and white unicorn is in his *Silence of the Wood*, and he showed a green figure dressed in black and riding a dragon backwards in *The Plague*. (*) For 10 points— name this man who depicted a small rowboat approaching sheer, oddly lit cliffs in *The Isle of the Dead*.

answer: Arnold Bocklin
14. **The place they stay in is sometimes called the Holt or the Laradr, and they are able to survive by eating only morning dew. Until they can see sunlight again, they will sleep in (°) Hodmimir's Forest, where they are protected from the fires of Surt. At the end of the cataclysm, these people whose names mean "life" and "eager for life" repopulate the Earth. For 10 points— name this pair that survives Ragnarok.**

   **answer:** Lif and Lifthrasir

15. **One source of these phenomena is stellar collapse such as that which occurs in type II supernovae, and in 1974 Hulse and Taylor inferred the existence of these phenomena by studying the energy (°) loss from a rotating pulsar. Most famously sought by the LIGO experiment, for 10 points— identify these phenomena which represent traveling wave solutions to the Einstein field equations.**

   **answer:** gravitational waves (accept gravity waves, etc)

16. **For fifteen years, he was the viceroy of the Congress Kingdom of Poland, and in order to marry countess Grudzinska, he had to renounce the throne of his homeland. Despite that, the death of his brother (°) Alexander saw a rally in Senate Square demanding this man and "constitution." For 10 points— name this man who the Decembrists sought to make tsar instead of the man who got the job, his other brother Nicholas I.**

   **answer:** Prince Constantine Pavlovich

17. **One film about this event turns on a copy of an itinerary for a visit to the Sheraton, and that film places this event in Chicago in 2007. An actual attempt to do this by (°) Samuel J. Bicke inspired a movie starring Sean Penn and set in 1974. This did not happen to William Hurt's character in a 2008 movie, because a body double made a speech in Madrid. For 10 points— name this subject of the movie Vantage Point.**

   **answer:** presidential assassinations (accept obvious equivalents; accept answers that refer specifically to George W. Bush only before "Samuel J. Bicke", since only the first example is about him)

18. **Ngozi and Gitega are some cities in this country, which contains Mount Heha. Its northwestern border is defined by the Ruwa River, and this country's interior contains such rivers as the Ruvironza and Rvubu. Bordering (°) Tanzania on the east and Lake Tanganyika on the south, its capital is Bujumbura. For 10 points— name this country found to the south of the similar Rwanda.**

   **answer:** Burundi

19. **Alpha and beta adaptins and the AP complex catalyze the triskelion assembly of the clathrin coated type of this, which is released by the helix-forming dynamin. Mediating endocytosis, it is (°) coated by COP I when moving ER proteins from the Golgi back to the ER, and by COP II when traveling from ER to Golgi. For 10 points— name this small, membranous organelle that transports substances.**

   **answer:** vesicle

20. **In 2001, Chris Assenheimer protested against the voting rules that gave Ichiro Suzuki the AL Rookie of the Year award by casting the only dissident first-place vote for this man. In 2007, he headed up a rotation that also included Jeremy Sowers, Jake (°) Westbrook, Paul Byrd, and Fausto Carmona. For 10 points— name this reigning AL Cy Young winner and heaviest player in the majors, a pitcher for the Indians.**

   **answer:** Carsten Charles Sabathia

21. **Karn's algorithm addresses the problem of message round trip times when employing it. Its header can be used to set special states such as "urgent" and "acknowledgment," and unlike the (°) User Datagram Protocol, it requires socket connections to be initiated before data can be sent. For 10 points— identify this protocol which is used to deliver packets and together with IP makes up the backbone of the Internet.**

   **answer:** TCP or transmission control protocol
22. As a teenager, this man's admissions application to Harvard was mistaken for a job application because he attached groundbreaking papers on modal logic he had written. One of his commentaries lays out the paradox that rules can never govern action, in his (*) *Wittgenstein on Rules and Private Language*. For 10 points—identify this man who distinguishes sense from reference in *Naming and Necessity*.

answer: Saul Kripke

23. A marionette opera by Haydn depicts this figure's "journey to the Earth," while the hymn "I vow to thee, my country" is embedded into a section about this figure. A certain composer's (*) 41st symphony was given this nickname by Johann Peter Salomon due to its size and grandeur, and it is also the "Bringer of Jollity" in *The Planets*. For 10 points—give this nickname of Mozart's last symphony.

answer: Jupiter

24. He unseated Charles Whitman in a 1918 gubernatorial race, and six years later, his hopes at the Presidential nomination were dashed when his anti-Prohibition stance and William McAdoo's "dry" planks were both considered too divisive at the Democratic convention. Later, this (*) "Happy Warrior" got the nomination but lost to Herbert Hoover. For 10 points—name this first Catholic to be nominated by a major party.

answer: Alfred "Al" Smith

25. In the 1950s, his sermons at Thomas Road Baptist Church defended segregation, and a fake Campari ad later caused him to sue Larry Flynt. At his 2007 funeral, Mark Uhl was arrested for a bomb plot, despite being a (*) student at the school this man founded, Liberty University. For 10 points—name this deceased preacher, perhaps best known for blaming lesbians and the ACLU for the 9/11 attacks.

answer: Jerry Falwell

26. An eleven-line poem, its writer labeled it a "curtal sonnet." The eighth line contains the aside "who knows how?", while the fifth refers to the "fold, fallow, and plough" which have "plotted and (*) pieced" the landscape. Ending "praise him," this poem lists "rose-moles," and "finches wings" as some of the "dappled things" that God should be glorified for. For 10 points—name this poem by Gerard Manley Hopkins.

answer: "Pied Beauty"
1. For 10 points—name these Jorge Luis Borges short stories.
   A. A man builds a canoe, then builds a man to carry on worship of the fire-god, then realizes he is but a built worshipper himself, in this story.
   answer: "The Circular Ruins" or "Las ruinas circulares"
   B. Madden arrests Yu Tsun for killing Albert, thus allowing a secret message about Allied army positions in Belgium to be published worldwide, in this story.
   answer: "The Garden of Forking Paths" or "El jardín de senderos que se bifurcan"
   C. In this story, the title event is compulsory, free, and able to make participants directors of The Company or prisoners, depending on chance.
   answer: "The Lottery in Babylon" or "La lotería en Babilonia"

2. It is pronounced in the life cycle hypothesis of personal spending. For 10 points each—
   A. Name this effect, in which people who have more money spend more freely.
   answer: wealth effect(s)
   B. This theorem says that the aggregate excess demand function does not entirely follow from individual excess demand functions, partly due to wealth effects.
   answer: SMD or Sonnenschein-Mantel-Debreu theorem
   C. Wealth effects can also screw up the "efficiency" named for this author of Mind and Society, in which no one can improve without someone else being harmed.
   answer: Vilfredo Pareto

3. Its lowest region is known as the D layer, which interferes with shortwave broadcasts, and it also contains the van Allen belts. For 10 points each—
   A. Identify this layer of the earth's atmosphere which begins about 30 miles above the surface.
   answer: ionosphere
   B. The strongly ionized F2 layer is known by the name of this man, who discovered it and subsequently won the Nobel Prize for his work.
   answer: Edward Victor Appleton
   C. The lower ionosphere is dominated by waves with a 24-hour period, which are known as the atmospheric variants of these phenomena caused by the moon.
   answer: tides

4. Labeled with the date "December 31, 1900," it opens "I leant upon a coppice gate." For 10 points each—
   A. Name this poem in which the title bird had "some blessed hope, whereof he knew, and I was unaware."
   answer: "The Darkling Thrush"
   B. This author of "The Darkling Thrush" and such other poems as "Channel Firing" may be better known for novels such as The Return of the Native.
   answer: Thomas Hardy
   C. This Thomas Hardy poem wonders if a "vengeful god" is enjoying his suffering and lashes out at the randomness of "purblind Doomsters."
   answer: "Hap"
5. This process is the key step in the Linde refrigeration cycle. For 10 points each—
A. Identify this process named for two Englishmen in which constricting the flow of a gas changes its temperature.
answer: Joule-Thomson or Joule-Kelvin process
B. The Joule-Thomson process takes place at a constant value of this variable, which is usually given as the sum of internal energy plus pressure times volume.
answer: enthalpy
C. In order to use the Joule-Thomson effect for cooling, the gas must be nonideal and be below this curve on the PV diagram.
answer: inversion curve or temperature

6. Tiberium Wars, Kane's Wrath, and Red Alert are among the imprints in this game line. For 10 points each—
A. Name this Westwood Studios series featuring the Global Defense Initiative.
answer: Command & Conquer
B. Led by Kane, this shadowy organization opposes the GDI in Command & Conquer.
answer: The Brotherhood of Nod
C. Before Command & Conquer, Westwood was known for this game, subtitled "The Building of a Dynasty," which lets you control spice harvesters on Arrakis.
answer: Dune II: The Building of a Dynasty

7. The ghost of the previous king meets with no luck in trying to talk the title group out of a second attack. For 10 points each—
A. Name this play set in fifth-century BCE Asia, in which the widow of that ghostly king greets her defeated son after a battle.
answer: The Persians or Persai
B. This author of Seven Against Thebes and the Orestia wrote The Persians.
answer: Aeschylus
C. This is the female lead in The Persians, the mother to the returning Xerxes and wife of the dead Darius.
answer: Atossa

8. For 10 points each—answer some questions about an extremely useful tool:
A. Utilized by such editors as sed and filters like grep, these strings consist of characters which indicate to a parsing engine what pattern is to be matched.
answer: regular expressions or regexps
B. This operation returns the smallest subset containing a specified string that is closed under concatenation. It is used to implement wildcards.
answer: Kleene star
C. Quantifiers in regular expressions can be either lazy or this kind. This word also describes algorithms like Dijkstra's which always choose the locally optimal step.
answer: greedy

9. Translating as "National People's Party," this group's platform was the Three Principles of the People. For 10 points each—
A. Name this group which ruled a certain place from 1949 to 2000, the rival of the Democratic Progressive Party.
answer: KMT or Kuomintang
B. This generalissimo and successor to Sun Yat Sen led the Kuomintang to Taiwan and was in charge there until his 1975 death.
answer: Chiang Kai Shek
C. This "richest man in the world" and onetime KMT politician said no way to exile in Taiwan in 1949, instead moving to the U.S. to expand his business empire.
answer: T.V. Soong
10. Mel Martinez and Bill Nelson are this state's Senators. For 10 points each:
A. Name this state, which apparently still can't get that whole "voting" thing right, as it held a Democratic primary that doesn't count.
answer: Florida
B. Apparently a new breed of Republican, this current Florida governor is a lifelong NAACP member and is widely assumed to be gay.
answer: Charlie Crist
C. This retired three-term Democratic Senator and frequently mentioned VP possibility defeated Crist soundly in his last re-election campaign, 1998.
answer: Bob Graham

11. It warns that "You think you've changed your mind" but "You'd better change it back or we will both be sorry." For 10 points each—
A. Name this ominous song from the 1981 album Dare about a man who meets a waitress.
answer: "Don't You Want Me (Baby)
B. Like "I Need Your Loving" and "Keep Feeling Fascination," "Don't You Want Me" is a song by this Philip Oakley-fronted British band.
answer: The Human League
C. Portrayed by Philip Seymour Hoffman in Almost Famous, this founder of the frenetic-analogy style of rock criticism died while listening to Dare.
answer: Lester Bangs

12. For 10 points each— give the following about solutions:
A. This is a solution containing two volatile liquids that boils at constant composition.
answer: azeotrope or azeotropic mixture
B. A maximum-boiling azeotrope shows significant negative deviations from this law relating vapor pressure and mole fraction of a solvent.
answer: Raoult’s Law
C. When Raoult’s Law is valid for a solvent, this law will hold for the solute.
answer: Henry’s Law

13. For 10 points each— name these things with something in common.
A. The Beatles speculate in "A Day in the Life" about filling this venue, named for a consort of Victoria.
answer: Royal Albert Hall
B. John Watson achieved the remarkable feat of making a small child afraid of rats in a 1920 behaviorist study of this subject.
answer: Little Albert
C. The founder of the Ascanian Dynasties, Albert the Bear, ruled in this German principality in the twelfth century.
answer: Brandenburg

14. Formally known as the Seventh Armored Division, this group was led by Allen Francis Harding. For 10 points each—
A. Name these British opponents of the German Afrika Korps.
answer: Desert Rats or Rats of Tobruk
B. The Afrika Korps was aligned with a different animal, as it was led by this "Desert Fox."
answer: Erwin Rommel
C. Broadcasting under this monniker, turncoat Englishman William Joyce attempted to demoralize the English by mocking the Desert Rats.
answer: Lord Haw Haw
15. For 10 points each—name these works of religious studies:
A. "The Sick Soul" and "The Value of Saintliness" are found in this survey by William James.
answer: *The Varieties of Religious Experience*
B. This dubious winner of a 1996 Pulitzer approaches its subject as a changeable literary figure and was written by Jack Miles.
answer: *God: A Biography*
C. This Emile Durkheim book uses Aborigines to study the social dimension and the importance of sacred/profane distinctions in the title system.
answer: *The Elementary Forms of the Religious Life*

16. Grand plans for a canal across this structure are regularly proposed. For 10 points each—
A. Name this landmass which connects the Malay Peninsula to the bulk of Thailand.
answer: Isthmus of Kra
B. A little south of the Isthmus of Kra, this Malaysian island-state sits in the Strait of Malacca and contains the Batu Feringgi resort and Georgetown.
answer: Penang
C. More westerly than the Strait of Malacca, this sea has shoreline with Sumatra and contains some namesake islands that are part of India.
answer: Andaman Sea

17. The offensive coordinator during the Eagles NFC Championship Game streak, he was hired as a head coach before the 2006 season. For 10 points each—
A. Name this current head coach of the Minnesota Vikings.
answer: Brad Childress
B. This large, stupid man, who scalped his complementary Super Bowl tickets among other scandals, was replaced as Vikings head coach by Childress.
answer: Mike Tice
C. Tice himself had replaced this ten-year head coach, who went on to the Cardinals and discovered that "they are who we thought they were" before being fired.
answer: Dennis "Denny" Green

18. The title character accepts responsibility for 57 children in this work, none of which are actually his. For 10 points each—
A. Name this novel about a man who leads a foundation named for him in a town also named for him.
answer: *God Bless You, Mr. Rosewater*
B. *God Bless You, Mr. Rosewater* is by this author of *Slaughterhouse Five*.
answer: Kurt Vonnegut
C. In this Vonnegut novel, Eliot Rosewater sets the plot into motion by inviting Kilgore Trout to an arts festival, where he will meet Dwayne Hoover.
answer: *Breakfast of Champions*

19. The embryonic disc develops into the ectoderm that becomes skin and hair, while the mesoderm becomes muscle and bone. For 10 points each—
A. Name this process in which embryonic tissue differentiates into brain tissue.
answer: neurulation or neural induction
B. During neurulation, this population of cells migrates adjacent to the neural tube to form the future cranial and spinal ganglia and gill arch derivatives like facial muscles.
answer: neural crest cells
C. This B vitamin found in vegetables is needed for complete closure of the neural tube, a defect of which leads to rostral anencephaly or caudal spina bifida.
answer: folate or folic acid
20. For 10 points each—name these Uruguayan cities on the Río de la Plata.
A. Sharing its name with a noted "cry" from the Mexican Revolution, this Uruguayan city is known as the hometown of composer Sergio Cervetti.
   answer: Dolores
B. This city on the San Gabriel Peninsula includes the Street of Sighs and the Real de San Carlos resort.
   answer: Colonia del Sacramento
C. This capital of Uruguay also overlooks the estuary.
   answer: Montevideo

21. Alvaro accidentally kills his beloved's father while trying to elope with Leonora. For 10 points each—
A. That happens in what opera, which ends with Carlo and his sister both dying?
   answer: *The Force of Destiny* or *La forza del destino*
B. *The Force of Destiny* was composed by this creator of *La Traviata* and *Rigoletto*.
   answer: Giuseppe Verdi
C. Invitations to the title shindig ultimately cause Renato to kill Riccardo and Amelia to have her fidelity questioned in this Verdi opera.
   answer: *A Masked Ball* or *Un Ballo in Maschera*

22. It was spearheaded by the Armed Forces Movement, under the leadership of Francisco da Costa Gomes. For 10 points each:
A. Name this more-or-less bloodless, liberalizing coup, which began in 1974 and was inspired by the book *Portugal and the Future*.
   answer: the Carnation Revolution
B. The Carnation Revolution put an end to this fascist vision of Portugal, which shares its name with the Getulio Vargas regime in Brazil.
   answer: Estado Novo
C. By the time of the Carnation Revolution, Marcelo Caetano had taken over for this deceased founder of the Estado Novo, the 36-year dictator of Portugal.
   answer: Antonio Salazar

23. It was called the best statue in the world by Pliny the Elder. For 10 points each—
A. Name this pioneering nude, in which a goddess holds some cloth and leans on a railing.
   answer: Aphrodite of Cnidus
B. This sculptor of *Hermes Carrying the Infant Dionysus* executed the Aphrodite of Cnidus.
   answer: Praxiteles
C. Praxiteles designed the altar for this building, whose columns are by Scopas and which was planned by Chriocratus.
   answer: Temple of Artemis at Ephesus

24. He may have orchestrated the assassination of Philip of Macedon, and he was ultimately killed by Bessus. For 10 points each—
A. Name this last Achaemenid king of Persia.
   answer: Darius III Codommanus
B. This scheming minister poisoned both Artaxerxes III and Arses to put Darius on the throne, but was then poisoned himself in a reversal of fortune.
   answer: Bagoas
C. Darius and Persia were completely defeated by Alexander the Great at this 331 BCE battle at what is now Irbil, Iraq.
   answer: Gaugamela or Arbela
25. His pupils include Endoeus and Talos, who, like Perdix, was killed for being more talented than him. For 10 points each—
   A. Name this father of Icarus who designed the Labyrinth.
      answer: Daedalus
   B. Another son of Daedalus shares his name with this brother of Daunius and Peucetius, who colonized Italy.
      answer: Iapyx
   C. Iapyx, Daunius, and Peucetius were the sons of this man, who sacrificed a baby to Zeus and thus caused most of humanity to be wiped out in a flood.
      answer: Lycaon

26. They were later renamed the Order of American Knights, then the Sons of Liberty. For 10 points each—
   A. Name this group, popularly known as the Copperheads, which was founded in Cincinnati in 1854 by George Bickley to propagandize for slavery in the North.
      answer: The Knights of the Golden Circle
   B. This member of the Knights of the Golden Circle got to "ex parte hard" when the Supreme Court ruled in 1864 that he could not be tried by a military court.
      answer: Lambdin P. Milligan
   C. This Ohio Congressman was considered the leader of the Copperheads and was exiled by Lincoln for his sympathies, first to the Confederacy and then to Canada.
      answer: Clement Laird Vallandigham