1. Its name first appeared in Vienna in 1760, used by Ferlandis de Bergamo. Despite its early origins, Stanislaw Skrowaczewski wrote the first known concerto for it in 1970. It is often associated with pastoral settings in music, stemming from its prominence in Symphony Fantastique's third movement. It is also featured prominently in Berlioz's Harold in Italy, Act III of Wagner's Tristan und Isolde, and Sibelius's Wild Swan of Tuonela. FTP name this relative of the oboe with a pear shaped bulb, pitched a fifth below the oboe.

Answer: English Horn or Cor Anglais
2. H.O. Rosenberg also gathered data useful in its creation, although he was slow to interpret it. The vertical axis usually goes from 15 to 10 , and 8 letters are written across the top. The sun is placed in the middle of the diagonal main sequence, and it is important to the theory of stellar evolution and to the understanding of star clusters relationships. FTP name this 1911 diagram which plots star's absolute magnitude vs. their spectral type, named for the Danish and American astronomers who independently created it.

Answer: Hertzsprung-Russell diagram.
3. The E type of this family of proteins is involved in allergic reactions, while the A type is found on mucosal surfaces. The M type is found as a pentamer, and is critical for primary immune response, as it has a high affinity. The most abundant form, however, is the G type, which is composed of two light chains and two heavy chains, and is commonly known as an antibody. FTP, name this class of proteins.

Answer: IMMUNOGLOBULINS (prompt on early antibody)
4. The portrait in the third chapter of God as a mighty warrior hurling spears and riding in a chariot is likely an editor's addition to off-set the skepticism of this book's title prophet that God would eventually bring justice to the world. Although agreeing that Babylon's attack is to punish Judah, it differs from the deuteronomist school in that he does not see this suffering as the result of collective guilt. FTP, name this book, whose prophet decides to "stand on his watchtower" awaiting God's response, which is simply "the upright man will live by his faithfulness."

Answer: Habakkuk
5. It started at Spotsylvania Courthouse, and continued between the Army of Northern Virginia and the Army of the Potomac with the Yankees trying to get around the right flank of the Confederates all the way down to Richmond. It ended with General Grant becoming frustrated and ordering a frontal attack on the ANV at Cold Harbor, which resulted in about 5000 Northern casualties in the span of 30 minutes. FTP name this campaign which resulted in the ANV losing its mobility by being forced to defend Petersburg and Richmond.

Answer: Overland Campaign
6. Just 637 square miles in size, this island is principally populated by Arabs, who mainly speak Kiswahili, and by the Hadimu and the Tumbatu, who speak Bantu. In the 1880s, the British usurped control of it from the sultan Barghash, and it became a British protectorate in 1890. In 1963, the sultanate regained its independence, and it became a member of the British Commonwealth. But in January 1964, leftist Africans overthrew the sultanate and established it as a republic. FTP, name this island that merged in April 1964 with the Tanganyika Republic to create Tanzania.
ANSWER: Zanzibar Island
7. Natasya runs off with Rogozhin once, leaves him, runs back off with him after leaving the title character stranded at the altar, and then is murdered by him. Aglaya loved the title character, but when he had an epileptic fit at her house, her family, the Epanchins, banished him. The title character was epileptic, and so people believed he fit the titular role. For 10 points, what is this Dostoyevski novel featuring Prince Myshkin in the title role?

Answer: The Idiot
8. It was first published in 1931, much to the consternation of David Hilbert, who was then trying to put all of mathematics on firm logical foundations. Its first part states that any consistent mathematical theory that includes the natural numbers must be incomplete, while the second part states that such a theory cannot contain a proof of its own consistency. FTP, identify this theorem, often named for an Austrian-born American logician, that states that some parts of mathematics are based on ideas that cannot be proven within the system of mathematics.

Answer: Gödel's theorem or Incompleteness theorem
9. This work, first appearing in 1971, was welcomed by many as an alternative to Utilitarianism. This work proposes a scenario in which all people, prior to actually existing, participate equally in designing the world they will inhabit. However, no one knows his own attributes in comparison to anyone else's, so it makes no sense to maximize the overall utility in society. Instead, people would try to safeguard themselves against the worst that society had to offer by ensuring that they had equal liberties. They would also try to distribute the wealth so that the poor were as well-off as possible. FTP, name this book, which proposes this "veil of ignorance" scenario, written by John Rawls.

Answer: A Theory of Justice
10. One of these, issued by Charles VII of France in 1438, sharply limited the papal authority over the church in France and established the liberty of the Gallican Church. The more famous one was guaranteed by France after the War of Polish Succession and by Prussian king Frederick William I in hope of Prussia gaining Julich and Berg. It lost some its force when Hungary guaranteed it only after Charles VI confirmed the Hungarian constitution. FTP, identify this law of 1713 that allowed Maria Theresa to inherit Austria.

Answer: PRAGMATIC SANCTION
11. When he assumed the throne in 481, he was only 15 years old. The kingdoms of the Alemanni, the Burgundians, and the Visigoths in Gaul fell to him between 486 and 511 . However, the most significant event of his career allowed him to turn his wars of aggression into holy wars. FTP, name this king of the Franks who compared himself to Constantine and contributed to the Christianization of Europe after he converted to Christianity.

## ANSWER: CLOVIS

12. Jack Maggs, his latest novel, whose title character bears a striking similarity to Magwitch of Great Expectations, was awarded the 1998 Miles Franklin Award for best Australian fiction. The multi-award-winning author of five novels including, Bliss, Ilywhacker, The Tax Inspector and The Unusual Life of Tristan Smith, he has won every major literary award in Australia. For ten points, name this author who won the 1988 Booker Prize for his novel Oscar and Lucinda.

Answer: Peter Carey
13. Dr. Paul Proteus, a member of the ruling class of engineers, becomes unhappy with his life and the state of society, and he becomes the leader of a revolutionary organization known as the Ghost Shirts. They start a rebellion, but it fails when Proteus and his friends discover their followers making gadgets out of the machines they have been destroying. The setting for these events is Ithaca, New York, where automated machines dominate the workplace and the home. FTP, name Kurt Vonnegut's first book, titled for an automated instrument.

ANSWER: PLAYER PIANO
14. It still occupies its original position on a tall pedestal near the façade of the church dedicated to St. Anthony of Padua. The overwhelming image of irresistible strength and unlimited power in this work is reinforced visually by the careful placement of a sphere, reviving a venerable ancient symbol for hegemony over the earth. At approximately 11 feet by 13 feet it is the largest such work by the artist. Deriving inspiration from, FTP, the mounted Marcus Aurelius in Rome, identify this mid-15th century bronze monument portraying the recently deceased commander of the Venetian armies, by Donatello.

Answer: The Equestrian Monument (or Statue) of Gattamelata or Equestrian Monument (or Statue) of Erasmo da Narni
15. It contains rhodium, which takes nitric oxide and decomposes it into innocuous nitrogen and oxygen gas. Platinum is also present within its porous ceramics, which at several hundred degrees celsius will oxidize carbon monoxide. A computer is often also present, which adjusts the oxygen level for maximum efficiency of hydrocarbon burning. FTP, name this piece of technology found between your car's motor and muffler, whose chemical reactions are made possible by exhaust heat.

## Answer: Catalytic Converter

16. This film was responsible for what Frank Capra called the most embarrassing moment of his career; at the 1933 Academy Awards presentation for best director, Will Rogers said, "Come on down, Frank," but the award was for Frank Lloyd for Cavalcade rather than this Capra film. Based on Damon Runyon's story "Madame La Gimp", it tells about an old flower seller who is helped by gangster friends to deceive her visiting daughter into thinking she is comfortably placed. FTP, identify this film starring Warren William and May Robson, who earned a nomination for Best Actress.

Answer: Lady for a Day
17. The main narrative is interspersed with chapters from a book by one of the characters about Pontius Pilate. This novel opens at Patriarch's Ponds, where a conversation between Bezdomny (byez-DOME-nee) and Berlioz is interrupted by a mysterious stranger, who predicts that Berlioz will have his head cut off by a Komsomol member. Woland goes on to meet the title characters, one of whom he brings to a supernatural ball, accompanied by a demon named Azazello and a giant black cat named Behemoth. All this occurs in, FTP, what last and greatest novel of Mikhail Bulgakov (bool-GAH-koff)?

Answer: The Master and Margarita (Master i Margarita)
18. The economist H.D. MacLeod first used the current name for this observation in the 19th century. Here is a historical example of it from that time: The United States had set an exchange ratio between silver and gold of 15:1, while ratios in Europe were slightly higher, so it was profitable for those who owned gold to sell it in Europe and take their silver to the U.S. mint. In effect, the exchange rate for silver abroad was driving the gold out of the U.S. FTP, name this law, which simply stated is "bad money drives out good."

Answer: Gresham's Law
19. Although this novel begins with a quote from Virgil's Georgics stating that the best days are the first to flee, the book itself belies the quote, as it is ostensibly a collection of memoirs written by the narrator regarding a certain individual from his childhood. Although he flirts with all of the hired girls and has a brief fling with Lena Lingard, he is always drawn irresistibly back to the title character. FTP, name this Willa Cather novel narrated by Jim Burden about a member of the Shimerda family.

ANSWER: My Ántonia (stress on first syllable)
20. This man was born in 1844 in St Boniface in northwestern Canada, and was sent to Montreal for religious training. He gave up on studies and religious calling and moved to Minnesota in 1866. He moved back to St Boniface in 1868, at which time he did that for which he is most famous, involving the Canadian purchase of Rupert's Land, present day Manitoba. In 1878 he was pardoned with the stipulation that he leave Canada for five years. He became a U.S. citizen, and lived in Montana, but in 1884 returned to Canada and claimed that since the Dominion had not lived up to its obligations in his belief, the control of the west reverted from the Dominion to the Métis and natives. He then led the North-West Rebellion, for which he was executed in 1886 by the Canadian government. FTP name this leader of the Red River Rebellion.

Answer: Louis Riel (fils)

1. Name the specific quantum number from a brief description
a) This quantum number can take either the value $+1 / 2$ or $-1 / 2$, and is the number addressed specifically in the Pauli exclusion principle.
Answer: Spin quantum no.
b) This number addresses the shell to which a specific electron is assigned, and increases in value as distance from the nucleus increases.
Answer: Principle qu. no.
c) It describes the angular momentum of the electron, and varies according to the subshell to which the electron is assigned.
Answer: Orbital or Azimuthal qu. No.
2. Name the muscles from a description for 10 points each.
$\mathrm{A}(10)$. What is the muscle that runs from the outer hip to the inner part of the thigh?
Answer: Sartorius
$\mathrm{B}(10)$. What is the more common name given to the soleus and gastrocnemius (gas-struk-NEM-ee-us) muscles? Answer: Calf or Calves
$\mathrm{C}(10)$. This two-word muscle gets its name due to the fact that it is located on the side of the body, toward the back.
Answer: Latissimus Dorsi
3. Name the American president of the late 19th century, given a piece of legislation enacted during his presidency, FTPE
A. Pendleton Act Answer: Chester Alan Arthur
B. Sherman Silver Purchase Act Answer: Benjamin Harrison
C. Dawes Severalty Act Answer: Grover Cleveland
4. Answer the following about works of chamber music, FTP:
a. [10] this Schubert piece is scored for violin, viola, 'cello, doublebass, and piano, a result of the instrument played by the commissioner of the work.
Answer: Trout Quintet
b. [10] This Dvorak trio is named after a traditional Slavic folk ballad style characterized by sudden emotional shifts.
Answer: Dumky trio
c. [10] Messiaen composed this work while in a prisoner of war camp in Silesia in 1940, and the few available instruments dictated the scoring of the piece, which was inspired by a quote from Revelation.
Answer: Quartour Pour la Fin du Temps (Accept: Quartet for the End of Time)
5. Answer these questions about the Great Northern Railway Company FTP each.
A. This Canadian-born financier founded the company in 1890 and was its president between 1893 and 1907. Answer: James J. Hill
B. Hill also controlled part of a competing company, the Northern Pacific Railway Company, with this man who was better known in the world of banking. The two later went on to purchase the Chicago, Burlington, and Quincy Railroad Companies in 1901 to give them an all-important connection to the South.
Answer: J. P. Morgan
C. In the same year, Hill set up the Northern Securities Company, a holding company to control the railroads. However, in 1904, the Supreme Court declared it a violation of this act.
Answer: Sherman Anti-Trust Act
6. Name these Boer War people/places FTPE
A.(10) The first battle of the Boer war, taking place on 12 Oct 1899.

Answer: Kraaipan
B.(10) The English commander who led the British Army in the Sudan and would later be the British Army Chief of Staff during the early days of World War I.
Answer: Lord Kitchener
C.(10) The Boer marshal who would later become the first head of the Freedom Party.

Answer: Jan Smuts
7. For the stated number of points identify the ego defense mechanism from its description.
A.(5) Retreating to an earlier developmental level involving less mature responses and usually a lower level of aspiration.
Answer: Regression
B.(5) Attempting to prove that one's behavior is justifiable and thus worthy of the approval of self and others.

Answer: Rationalization
C.(10) Gratifying or working off frustrated sexual desires in substitutive nonsexual activities socially accepted by one's culture.
Answer: Sublimation
D.(10) Incorporating external values and standards into the ego structure so that the individual is not subject to as external threats.
Answer: Introjection
8. Identify these famous comets for 10 points each.

A(10). This comet's period is unknown, but it lit up the skies of 1973.
Answer: Kohoutek
$B(10)$. This comet's period is unknown, but we know it is nothing now, as it collided with Jupiter in 1993.
Answer: Shoemaker-Levy 9
$C(10)$. This comet last appeared in 1995, and has a period of 2,380 years.
Answer: Hale-Bopp
9. FTPE, identify the Hemingway short story from a plot description.
A.(10) The captain of a charter fishing boat in Havana agrees to ferry illegal immigrants in order to raise money. When he discovers that a Chinese crime lord plans to abandon the human cargo on a deserted island, the captain kills him, and returns the men to Cuba.
Answer: One Trip Across
B.(10) Two men show up at a lunch counter in a midwestern town called Summit. After tying up the staff, and a hapless Nick Adams, they explain that they've come to kill the big Swede, a former heavyweight boxer named Ole Andreson.
Answer: The Killers
C.(10) An aptly named tale, it occupies only one and a half pages, and tells the story of an two Americans in Europe: a soldier, and a Nurse named Luz. The two become separated when the soldier is sent home, but Luz never comes home to meet him, and marries an Italian army captain instead.
Answer: A Very Short Story
10. Identify these characters in the Odyssey for the stated number of points each.
$A(10)$. This faithful dog remembered his master, but was too old to be overjoyed - fortunately for Odysseus.
Answer: Argus
$B(15)$. This man, a ringleader of Penelope's suitors accuses Penelope of unraveling the tapestry every night in the Council of Ithaca in Book Two.
Answer: Antinous
$C(5)$. This man called the Council of Ithaca and was the son of Odysseus.
Answer: Telemachus
11. Identify these members of the personnel for the landmark album Kind of Blue, fifteen each.
A. Known for his spare, angular playing, he wrote the liner notes titled "Improvisation in Jazz" for Miles Davis's Kind of Blue, as well as playing piano on that album and most other Davis albums of that period.
Answer: Bill Evans
B. He was an Evangelical minister in addition to his career as an alto sax player, and he was also featured on

Kind of Blue alongside Coltrane. He got his nickname as a result of his voracious appetite.
Answer: Julian "Cannonball" Adderly (note: apparently "cannonball" sounds like "cannibal" in the jazz world)
12. Identify the following plays by Jean-Paul Sartre from a description.
A.(10) A retelling of a part of the Orestia, it deals with the purpose and effects of religious guilt and repentence in society.
Answer: The Flies (Les Mouches)
B.(10) Garcin and Inez discuss their former lives in a large, hot room with terrible furniture.

Answer: No Exit
C.(10) A woman in a southern American city is forced to testify against a black man she knows to be innocent, because she has taken money in exchange for sex with a young white politician.
Answer: The Respectful Prostitute (La Putain Respecteuse)
13. For the stated number of points, identify the battle from the Persian wars.
A.(5) Under the leadership of Kallimakhos and Miltiades, the Athenians met the Persians on this battlefield and turned back Darius's army. Runners from this battlefield later inspired an olympic event.
Answer: Marathon
B.(10) Meaning "Hot Gates", the defense of this pass in northern Greece by 300 Spartans under Leonidas was eventually broken after the elite Persian troops known as the Immortals gained a passage to the rear of the Spartan troops.
Answer: Thermopylai
C.(15) This battle named for the promontory opposite Samos where the Persians beached their ships, saw the Greeks attack under the leadership of Leotykhidas. The Persian resistance fell when Ionian contingents in the Persian army deserted and helped the Greeks.
Answer: Mykale
14. Answer the following about the Pre-Raphaelite Brotherhood for ten points each.
a) This famous painter was one of the three original founders of the Brotherhood. Famous works include The Carpenter's Shop, Ophelia, and Autumn Leaves.

Answer: John Everett Millais
b) Although a painter in her own right, she is most famous as Dante Gabriel Rossetti's wife and as the model for Millais' Ophelia.

Answer: Elizabeth Siddal
c) This journal served as a forum for the creative efforts of the Pre-Raphaelite Brotherhood. Sadly, it had a run of only four issues.

Answer: The Germ
15. Name the subatomic particle type from clues, 10 points each.
A. (10) These include the electron, tau neutrino and muon.

Answer: Leptons
B. (10) These hadrons contain three quarks and include protons, neutrons and omegas.

Answer: Baryons
C. (10) These force-carriers include w-negative, w-positive and $z$.

Answer: (Unified electroweak) Bosons
16. Name these ancient philosophers FTP each.
a. This philosopher of Miletus held that everything derived from water, so it is fitting that he died by falling into a well.
Answer: Thales
b. This man from Acragas held matter to be made up of fire, earth, air and water. He reputedly leapt into the crater of Mount Etna to test his capacity for reincarnation.
Answer: Empedocles
c. He commonly laughed at human folly, and is remembered for stating that matter is made up of tiny particles which he called atoma.
Answer: Democritus
17. Answer these questions about the Crusades, FTSNOP
A. For five points each, name the four Crusader states set up in the Near East after the First Crusade

Answer: Kingdom of Jerusalem, Principality of Antioch, County of Tripoli, County of Edessa
B. FTP name the 1187 battle at which Saladin defeated the forces of the King Guy of Jerusalem, which resulted in the fall of Jerusalem and the Third Crusade.
Answer: Hattin or Hittin
18. Literary characters often have strange ways to die. Identify the following works from descriptions of character deaths FTSNOP.
5 -- Dickens was criticized for this novel in which Mr Krook, a gin drinking old man who has been on a bender for several hundred pages, finally bursts into flames and spontaneously combusts, causing the tenants on the floors below to wonder at the falling ash as it is quite warm for it to be snowing.
Answer: Bleak House
10 -- As punishment for being one of only three black characters in a Shakespeare play, (not to mention fathering a bastard child with the queen) Aaron the Moor is buried up to his neck and covered in honey; a sentence of death is passed upon any who touch or feed him.
Answer: Titus Andronicus
15 -- Alfred's wife Agnes is in love with her cousin Jan Bronski whose child she is carrying. Repulsed by the overtly phallic sight of the eels her husband cooks for dinner, she runs away from the table; after Jan "comforts" her, she returns to eat the entire plate of cold eels. For the next two weeks, she eats nothing but pounds of canned and pickled fish until she succeeds in killing herself.
Answer: The Tin Drum (Die Blechtrommel)
19. Anthony Trollope is not known for his subtleties; in The Warden he caricatures three famous figures from the nineteenth century. FTSNoP, identify the figures from Trollope's descriptions of the characters who represent them.
$5-\mathrm{Mr}$. Popular Sentiment is the most popular novelist of the nineteenth century; he writes his novels to address the social ills of the day. He is Trollope's main rival (though he won't admit such).
Answer: Charles Dickens
10 -- Dr. Pessimist Anticant rails against the present while he praises the past; Trollope crudely litters his characterization with such phrases as "representative men," "past and present," and "signs of the times," all taken from titles of this author's works.
Answer: Thomas Carlyle
15 -- Samuel Grantly, the archdeacon's youngest son, is nicknamed "soapy." His historical antecedent was the most famous nineteenth-century bishop of Oxford, a man who came to public renown for a series of published debates on evolution held with Darwin's bulldog Thomas Huxley.
Answer: Samuel Wilberforce
20. Name these musicians from Greek mythology, 15 each.
A. He was supposedly the inventor of the lyre, though he gave it to Apollo as a gift in return for stealing his cattle. Answer: Hermes
B. He invented melody and rhythm, and taught both Orpheus and Heracles, though the latter killed him with his own lyre after being admonished.
Answer: Linus

