

1996 ACF Nationals
Questions by Michigan 1 & 3

1. On an 1872 visit to Louisiana, where he had relatives in the cotton business, he painted his only picture to be acquired by a museum in his lifetime, The Cotton Exchange at New Orleans. The son of a banker, he idolized Jean Auguste Ingres {ang'-gruh}, and like Ingres was a masterful portraitist. Known for beach and racetrack scenes, this Impressionist also painted cafe scenes, as in The Glass of Absinthe. FTP name this painter known for his paintings featuring ballet dancers.

Answer: Edgar Degas

2. In 1979, astronomers Dennis Walsh, Robert Carswell, and Ray Weymann were surprised to see two quasars separated by only 6 arc seconds—especially when the quasars' spectra were nearly identical. The two images were actually the same quasar, whose light was bent around either a massive galaxy or a black hole. For 10 points—name this astronomical phenomenon in which light is deflected so that observers see two images of stellar objects.

Answer: gravitational lensing OR arched gravitational image prompt on: Einstein Ring

3. Born in 1841, he originally went to Paris to study medicine, but became more involved in journalism and anti-government activities. Although he tried his hands at drama and wrote a history of the Jewish people, At the Foot of Mount Sinai, which was illustrated by Henri Toulouse-Lautrec, his interests remained journalistic, and it was his paper, L'Aurore, which first published Zola's "J'accuse," condemning the anti-Semitism of the Dreyfus Affair. FTP name this eventual politician nicknamed the Tiger, France's premier during World War One.

Answer: Georges Clemenceau

4. At age fifteen he quit work to become "Prince of the Oyster Pirates" on San Francisco Bay and later won \$25 for his "Story of a Typhoon off the Coast of Japan" in a contest sponsored by the San Francisco Morning Call. FTP name this man who went on to write The Son of the Wolf, The Valley of the Moon, The Sea Wolf, and The Call of the Wild.

Answer: Jack London

5. The main theme of this work, which takes place at the house of Agathon, concerns love, to which such people as Aristophanes and Phaedrus give their own opinions. The main character treats love as a ladder on which one progresses from contemplating one body's to loving science. FTP name this dialogue, also called The Banquet, whose ending consists of a drunken Alcibiades praising Socrates.

Answer: Symposium (ask for more info on early buzz w/The Banquet)

6. It is a linear, unbranched homopolysaccharide of 10,000 to 15,000 D-glucose units. In this, it resembles glycogen and cellulose. However, since it is in the beta rather than the alpha-configuration, it has beta-1-4 glycosidic bonds, which leads to markedly different physical properties from glycogen, and unlike cellulose, it has an acetylated amino group at C-2 instead of a hydroxyl group. FTP what is this second most abundant polysaccharide in nature, a principal component of nearly a million species of arthropods?

Answer: chitin

7. According to historians, the name comes from a song-and-dance tune written by Thomas Dartmouth Rice, a white entertainer of the 1830's. By 1838, it conveyed an image of "a comic, jumping stupid rag doll of a man" and was used as a synonym for "Negro." It completes the lyric "Weel a-bout and turn a-bout/ And do just so/ Every time I weel about/ I jump" <blank> <blank>. FTP give this two-word term which was adopted to describe a series of laws which implemented the racial segregation okayed in the case of Plessy v. Ferguson.

Answer: Jim Crow

8. Some of the sights you can visit while in this city include the fifteen acre Albert Park; Wewlme Cottage, which is made out of a type of wood called kauri; the City Art Gallery, which contains some of the works by artist Frances Hodgkins; and Waitemata Harbor. FTP name this city, north of Wellington, which is New Zealand's largest city in terms of population.

Answer: Auckland

9. Mr. Green and Mr. Kenneth are lawyers in the neighboring village of Gimmerton. Zillah and Joseph are both servants at the title residence. Mr. Lockwood is one of the book's narrators, along with Ellen Dean, who goes to Thrushcross Grange with Catherine, and who relates to Lockwood the story of the Linton and Earnshaw families. For 10 points—which 1847 novel tells of Catherine and Heathcliff.

Answer: Wuthering Heights

10. Partially inspiring Vaclav Havel to action, some stories say the Czech Republic's secession was nicknamed after part of this band's name. This rock band hit its heyday in the late 60's and early 70's with songs like "Heroin" and "All Tomorrows Parties" and was a fixture in the avant garde scene with Andy Warhol. FTP name this band, whose members included Mo Tucker, John Cale, and Lou Reed.

Answer: Velvet Underground

11. His father was Amyntas. Kept as a hostage, he spent his boyhood in Thebes, where he was taught military strategy by Epaminondas. He formed the League of Corinth in 338 B.C. after his greatest victory at Chaeroneia, where he defeated the Greeks. His greatest supporter, Isocrates, and greatest opponent, Demosthenes, wrote similarly titled works praising and condemning him, respectively. For 10 points, identify this husband of Olympias, father-in-law of Roxane, and father of a precocious lad named Alexander.

Answer: Phillip II of Macedon

12. He often expressed his ideas in pairs or trios of concepts such as diachrony versus synchrony, language versus langue versus parole, signifiant versus signifie (EDITOR: accent aigu on last e), and syntagmatic and associative. His primary work, published posthumously in 1916, is Course in General Linguistics. For 10 points—name this Genevan linguist, a founder of modern linguistics.

Answer: Ferdinand de Saussure

13. This musician's interest in technology led him to study engineering at the Technical Hochschule in Vienna for two years, and would later allow him to astutely exploit recording media. Born in Salzburg, he gained his first appointment at the opera house in Ulm, and later at the Berlin Staatsoper. For 10 points—name this man who founded the Salzburg Easter Festival in 1967, and replaced Wilhelm Furtwangler as principal conductor of the Berlin Philharmonic in 1955, which he conducted until 1989.

Answer: Herbert von Karajan {kahr'-ah-yahn}

14. This novel's ending contains many deaths, including those of Marya Timofeyevna and Kirilov. One of the characters in this novel is based on the Russian revolutionary Sergey Nechayev. That character is Pyotr Verkhovensky who tries to persuade the main character, Nikolay Stavrogin, to join his revolutionary group. FTP name this Dostoyevsky work that is also known by the names The Devils and The Demons.

Answer: The Possessed (Accept The Devils or The Demons on an early buzz.)

15. Following his death, his coffin was carried by the waves and caught in a shrub at Byblos, where the divine power in his body gave such strength to the shrub that it grew into a tree, enclosing the coffin inside. This god's body was found, but then cut into 14 pieces by his evil brother. FTP name this deity, the first child of Geb and Nut, an Egyptian judge of the underworld and consort of Isis.

Answer: Osiris

16. His heart is buried in Dorset's Stinsford churchyard, while his ashes are in Westminster Abbey. From 1883 until his death, this author lived in Max Gate, a house that he built. While at Max Gate, this author wrote a novel about a farmhand who sells his wife and daughter to a sailor and a book about a woman who falls in love with Angel Clare. FTP name this author of The Mayor of Casterbridge and Tess of the D'Urbervilles.

Answer: Thomas Hardy

17. Born in Prussia in 1868, he contributed greatly to electrochemistry, devising a glass electrode to measure hydrogen ion concentration, as well as studying fuel cells. He attempted to formulate a process to extract gold from sea water, as he felt partly responsible for the large war debt of the German state. For 10 points—name this scientist better known for his role in developing poison gas, and whose process allows synthesis of ammonia from its atmospheric components.

Answer: Fritz Haber

18. Carol of Hohenzollern-Sigmaringen was pronounced the first king of this country in October, 1866, though the country did not achieve independence until the 1878 Treaty of San Stefano. Ferdinand I ruled from 1914 to 1927, followed by Michael I, who ruled until 1930, when his father, Carol II, returned from exile and deposed him. Michael I was restored to the throne in 1940, but was forced to abdicate in 1947 because of Communist pressure. Thus ended—for 10 points—the monarchy of what country, originally called the Kingdom of Wallachia and Moldavia?

Answer: Romania

19. In mathematics, it can be defined as the dot product of a vector field and the normal vector of a surface, or, more generally, as the rate of flow through a surface. In electronics, it is the product of an electric field perpendicular to a surface and may be calculated by Gauss's law. FTP give the term which in general usage may refer to being in the process of change.

Answer: Flux

20. Secretary General of the United Nations Organizing Conference in 1945-46, he had been with Franklin Roosevelt at Yalta. Later president of the Carnegie Endowment for International Peace, his loyalty was called into question by the revelation of the infamous Pumpkin Papers, copies of old purloined microfilm which had allegedly been hidden inside a hollowed-out pumpkin in his accuser's garden. FTP name this man accused of Communist activities by Whittaker Chambers and prosecuted by Richard Nixon.

Answer: Alger Hiss

21. She plans a hunting party to which Kriemhild and Siegfried are invited. When a rivalry among the women results, she learns the story of Kriemhild's wedding night. For 10 points—name this daughter of Wotan, won by Gunther with Siegfried's help, sometimes portrayed in Norse sources as a Valkyrie.

Answer: Brunhild(e)

21. His opponent received the largest popular vote plurality in American history, winning 61% of the popular vote in the presidential election. His namesake son followed him in politics, and was a U.S. congressman from California from 1968-83. Famed for stating "Moderation in the pursuit of justice is no virtue", he narrowly defeated Nelson Rockefeller in the Republican presidential race, but was soundly defeated in the presidential election due to his suggestions of escalating the Vietnam War. For 10 points, identify this politician, who only won 5 Deep South states and Arizona in the 1964 presidential election.

Answer: Barry Morris Goldwater (NOT Barry Goldwater Jr.)

22. Although the mantle is generally solid, it is hot enough to permit an oozing, plastic flow throughout a soft region of the upper mantle. For 10 points—name this zone of the earth's mantle that lies beneath the lithosphere and consists of several hundred kilometers of deformable rock.

Answer: asthenosphere

23. Its name became a misnomer after Italy joined. This organization suffered a blow in 1879 when Russia withdrew, but was renewed in 1881, and again in 1884, lasting until 1887, after which it was replaced by the Reinsurance Treaty. Formed by Germany, Russia, and Austria in 1873, this pact's objectives were to present a united front against France and against socialism. For 10 points—name this organization, named after Alexander II, William I, and Francis Joseph.

Answer: Three Emperor's League

24. He believes that if there is no immortality, then "anything is allowed", a statement which leads to the murder in the novel. His telling of the "Legend of the Grand Inquisitor" is indicative of his inability to resolve his humanism and belief in God. For 10 points—name this intellectual Dostoyevsky character, brother of Dmitri and Alyosha in The Brothers Karamazov.

Answer: Ivan Karamazov (take Ivan, if the title has been read)

26. A spaceship passes the earth at 80% of the speed of light. For 10 points—what is the length of a 1 meter horizontal rod when viewed from the earth (15 seconds).

Answer: 0.6 m or equivalents

27. When he returned to Paris in 1946 from Switzerland, he brought back the entire product of his four years of sculpting in only six matchboxes, which is hardly surprising. He was so obsessed with reducing the human to its bare essentials that he often kept chipping away at them until nothing was left. For 10 points—name this Swiss surrealist artist known for his bronze sculptures of elongated human figures, such as "Man Walking."

Answer: Alberto Giacometti

28. Balthasar and Peter are servants. Escalus is a Duke of Verona. Friar John is a friend of Friar Laurence. These characters—along with Benvolio, Paris, Mercutio, and The Nurse all appear in—for 10 points—what 1595 play.

Answer: Romeo and Juliet

Prepared from the algae *Gracilaria* and *Gelidium*, it dissolves in hot water, the solution gelling as it cools. For 10 points—name this thickener in nutrient media used for growing bacteria and fungi, the ultimate biologist's gelatinous product.

Answer: agar or agar-agar

Make money fast using mathematics! Take a solid gold sphere of radius 1, cut it into finitely many pieces, then reassemble the pieces into a solid gold sphere of radius 2. The catch? The pieces are cut in an infinitely complex manner. For 10 points—identify the mathematical paradox just described, recently popularized in a Scientific article celebrating April Fool's day.

Answer: Banach-Tarski Paradox

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1. Answer the following questions about Botswana.

1. For five points for three and ten points for all four correct, name the four countries that border it.

Answer: South Africa, Namibia, Zambia, and Zimbabwe

2. A majority of Botswana's people belong to eight ethnic groups, some of which are Kwen, Batswana, and Maletse. For another ten points what language do these ethnic groups speak?

Answer: Bantu

3. For a final ten, the University of Botswana, which was founded in 1976, is located in which city?

Answer: Gaborone

2. 30-20-10 name the woman.

1. She wrote the episodic novel Maud Martha and an autobiographical work entitled Report from Part One.

2. Some people separate her work into two divisions. Those two divisions are the period of time before and after she attended the 1967 Black Writers' Conference at Fisk University. There she met such writers as Madhubuti and Walter Bradford.

3. Among the honors bestowed on her are a Pulitzer Prize for her work "Annie Allen" and being named Illinois' Poet Laureate in 1969.

Answer: Gwendolyn Elizabeth Brooks

3. Answer the following questions about rebellions in early 13th century Provençal for 10 points each.

1. After what Lyons merchant who gave away all his goods and preached voluntary poverty starting in 1173 was one group of reformers named?

Answer: Peter Waldo

2. By what other name, derived from that of a town in southern France, was another group of Manicheist reformers known?

Answer: Albigenses or Albigensian

3. What man massacred a group of Albigenses in 1209 at the town of Beziers?

Answer: Simon de Montfort

4. Identify the following components of the immune system for ten points each.

1. This subdivision of the leucocytes (white blood cells) is itself subdivided into three groups, T-Cells, B-Cells and Natural Killer (NK) Cells.

Answer: Lymphocytes

2. The "B" in B-cells, it is the site of B cell maturation in birds.

Answer: Bursa of Fabricius

3. Composing approximately 50-70 percent of white blood cells, these members of the granulocyte family are known as the infantry of the immune system. They phagocytose and destroy foreign substances.

Answer: neutrophils OR Polymorphonuclear Leucocytes OR PMN

5. Identify the composer on a 10-5 basis:

1. 10 pts: 4 symphonies, including #1, Spring and #3, Rhenish

5 pts: More than 300 lieder, including the song cycle A Poet's Love, and piano music including Papillons, Carnaval, and Kinderszenen.

Answer: Robert Schumann

2. 10 pts: 12 symphonies, including #1, The Unforeseen, #3, The War, and #5, The Peace

5 pts: Rudepoema and Symphony #6, The Mountains of Brazil

Answer: Heitor Villa-Lobos

3. 10 pts: 7 symphonies, plus the Kullervo Symphony as well as Pohjola's Daughter.

5 pts: The Swan of Tuonela, Finlandia

Answer: Jean Sibelius

6. It's a name game bonus. Give the following literary chains, each of which contains a work of children's lit linked to another work of literature, for the stated number of points.

1. 5 pts: Antoine de St. Exupéry's story of alien royalty and a Pat Conroy novel about a man's affair with his psychiatrist.

Answer: The Little Prince of Tides

2. 5 pts: Margaret Mitchell's story of Scarlett and Kenneth Grahame's tale of Rat, Toad, and Badger

Answer: Gone with the Wind in the Willows

3. 10 pts: A Robert Louis Stevenson book with Admiral Benbow and a Newberry Award winning novel by Scott O'Dell.

Answer: Treasure Island of the Blue Dolphin

4. 10 pts: An episodic story about a two-inch-tall mouselike boy who races a toy boat in Central Park and hunts for his bird Margalo, and a novel a girl named Amy who is born and lives much of her life at the Marshalsea prison.

Answer: Stuart Little Dorrit

7. Identify the members of the royal house of Thebes, according to Greek mythology, for 10 pts each.

1. The mother of Dionysus

Answer: Semele

2. Dionysus' cousin who disbelieved in the god of wine and was killed by his own mother

Answer: Pentheus

3. The brother of Antigone who attacked Thebes, seeking the throne.

Answer: Polyneices

8. Relive America's glorious battle against the Evil Empire by answering the following questions about the Cold War for the stated number of points.

1. In 1960, the USSR shot down an American spy plane. For 5 pts. each, what type of American plane was shot down by the Soviets and who was piloting it?

Answer: U-2 and Francis Gary Powers

2. Powers was shot down by SAMs near what city in west-central Russia, the same city where Tsar Nicholas II and his family are believed to have been executed. It is now called Yekaterinburg and is the home town of Boris Yeltsin.

Answer: Sverdlovsk

3. What spy, in U.S. custody since 1957, was exchanged for Powers in 1962?

Answer: Rudolf Abel

9. Identify the following law or effect. 10 pts from the first clue, 5 from the second.

1. 10 pts. Two systems in thermal equilibrium with a third system must be in thermal equilibrium with each other.

5 pts. This law of thermodynamics was postulated after the first, second, and third were worked out.

Answer: Zeroth law

2. 10 pts. This effect occurs when a gas is allowed to expand without any heat to enter from outside. The gas cools and may eventually become a liquid after several repeats.

5 pts. It is named after its discoverers- the first is the namesake of the unit of energy and the second is Lord Kelvin's name prior to becoming Lord Kelvin.

Answer: Joule-Thomson effect

3. 10 pts. This real gas equation is formed by replacing V in the ideal gas law with V-nb to account for repulsive forces and adding a term to account for attraction proportional to the square of the gas concentration.

5 pts. It is named after the Dutch physicist who described a variety of weak intermolecular forces that bear his name.

Answer: Van Der Waals Equation

10. Given the description, name the described type of administrator, for 10 points each.

1. Charlemagne installed these to rule his marches, and it became a hereditary German title of nobility.

Answer: Margrave

4. Philip II Augustus created these positions to administer his lands. The word, derived from old French for old servant, came to mean an official in the household of a medieval prince who had charge of feasts

Answer: Seneschal

5. Pope Gregory VII created these positions to administer the church. In ancient Rome, it was an ambassador sent to a foreign nation, or a subordinate to a Roman general.

Answer: Legate

11. For 10 points each--name these characters from Shakespeare's Much Ado About Nothing:

1. He is the pompous and verbose self-important constable.

Answer: Dogberry

2. She is the daughter of Leonato, who is stunned by the false accusation delivered against her and by Claudio's repudiation of her in the church.

Answer: Hero

3. Hero's cousin, she turns to Benedick for help when Hero is slandered.

Answer: Beatrice

12. Identify the book of the Bible, 30-20-10:

1. It is the only book of the Bible which mentions the country of India.

2. It is also the only book of the Bible which does not mention God.

3. It recounts the deliverance of the Jews from persecution in the Persian Empire through the efforts of the title heroine, and is commemorated in the Jewish feast of Purim.

Answer: Esther

13. Amino acids are degraded to one of seven common metabolic intermediates. Five of these participate in the citric acid cycle, one is an end product of glycolysis, and the last sometimes called a ketone body. Name any 3 of the 6 for 10 points each:

Answer: Pyruvate, Oxaloacetate, Fumarate, Acetoacetate, alpha-Ketoglutarate, Succinyl-CoA, Acetyl-CoA

14. Name these Gabriel Garcia Marquez works for 10 points each:

1. Patriarch Jose Arcadio Buendia builds the city of Macondo in the middle of a swamp; problems ensue.

Answer: One Hundred Years of Solitude or Cien años de soledad

2. This is the story of two lovers, the artistic Florentino Ariza and the wealthy Fermina Daza, whose enduring love contrasts with the surrounding corporeal decay.

Answer: Love in the Time of Cholera or El amor en los tiempos del colera

3. This brief 1961 story recounts the lonely agony of a retired colonel waiting for a pension which never comes in a small remote town full of hate and intrigue.

Answer: No One Writes to the Colonel or El coronel no tiene quien le escriba

15. Identify the architectural terms from description, 5 points each:

1. A row of windows in a wall that rises above the adjoining roof; especially in the upper part of the nave of a church.

Answer: clerestory

2. This type of vault is formed by the intersection at right angles of two barrel vaults of equal height and diameter.

Answer: groin vault

3. The vertical channels on a column shaft.

Answer: flute

4. In a cruciform church, it is the arm forming a right angle with the nave.

Answer: transept

5. Large, ornate, round stained glass windows, they first appeared in Gothic cathedrals of the 12th century, and symbolize the Virgin Mary.

Answer: rose window

6. The crowning, projecting architectural feature, the uppermost part of the entablature.

Answer: cornice

16. Given a description of a foreigner who aided in the American Revolution, identify him, FTP each.

1. This Polish count, the founder of the American cavalry, died at the Battle of Savannah.

Answer: Casimir Pulaski

2. This French admiral aided the Americans in obtaining Cornwallis's surrender at Yorktown.

Answer: Admiral de Grasse

3. This Prussian trained Washington's forces at Valley Forge.

Answer: Baron von Steuben

17. Name the spectrographic technique, 10 points each.

1. This type of spectrography records the change of energy a nucleus undergoes from aligning with to against the magnetic field

Answer: Nuclear Magnetic Resonance or NMR

2. This type of spectrograph resembles IR but uses visible light instead of infrared and measures the energy of the photons scattered by the substance.

Answer: Raman

3. This type of spectrography is used to determine the physical structure of crystals. It consists of shooting a beam of high energy rays at the sample and examining the diffraction pattern.

Answer: X-ray diffraction OR X-ray Crystallography

18. For ten points each, identify these U.S. national parks.

1. This park was named by Mormons who settled the area in the 1850s. The main canyon is carved by the Virgin River. The park also contains a structure called The Great White Throne.

Answer: Zion National Park

2. Situated near Frenchman Bay, it was the first national park to be established in the eastern United States.

Answer: Acadia National Park

3. This national memorial park is over 70,000 acres in area. Wind Canyon and the Little Missouri River are features in this North Dakota park.

Answer: Theodore Roosevelt National Memorial Park

19. Many terms in the field of botany derive themselves from Greek, for ten points each identify these terms:

1. This type of tropism is evidenced in climbing plants whose tendrils wrap around various supports. It comes from the Greek for "touch".

Answer: Thigmotropism

2. This plant division includes mosses, liverworts, and hornworts. Some people, though, are now starting to classify only the mosses in this division, which is from the Greek for "moss".

Answer: Bryophyta

3. This term derives from the Greek words for "container" and "seed".

Answer: Angiosperm

20. Identify the following authors—10 pts from a description of a work, 5 points from the work.

1. 10 pts. Set in Saigon during the French occupation the book relates the conflict between a cynical foreign correspondent and the idealistic American intelligence officer Pyle.

5 pts. The Quiet American

Answer: Graham Greene

2. 10 pts. The book is a semiautobiographical account of the author's experiences as a dishwasher in a posh hotel and as a homeless vagabond in Europe during the 1930's.

5 pts. Down and Out in Paris and London

Answer: George Orwell

3. 10 pts. The short story recounts the life of a circus performer who perfected fasting into an art. The performer finally dies after suffering from the indifference of the townspeople.

5 pts. A Hunger Artist

Answer: Franz Kafka

21. (Mathematics)

Suppose you are designing a VLSI circuit to perform multiplications, of non-negative integers but only have three multiplier modules, each of which may only perform multiplications modulo 3, modulo 5, and modulo 7, respectively. (i.e. the first multiplier cannot deal with numbers greater than 3)

1. For 10 points, what number theoretic theorem allows you to use the given multipliers to multiply numbers two greater than 3, 5, or 7 by performing the multiplication with respect to 3, 5, and 7, and unmapping the result?

Answer: Chinese Remainder Theorem

2. For 5 points, how large can one allow products to become while remaining certain of the accuracy of a multiplication performed using our three multipliers and the Chinese Remainder Theorem?

Answer: 104 (3 times 5 times 7 minus 1)

3. If you know in advance that a product is less than or equal to 104, and that this product is equal to 1, 2, and 3 modulo 3, 5, and 7, respectively, what, for 10 points, is this product?

Answer: 52

4. For 5 points, if you are given only that the product may be represented by an eight bit unsigned integer, what value other than 52 could the product be if its values modulo 3, 5, and 7 were 1, 2, and 3, respectively?

Answer: 157 (52 plus 3 times 5 times 7)

22. Identify the following ships involved in the exploration and settlement of America.

1. For 5 points, identify either of the two ships that set sail for North America in 1527 from Plymouth.

Answer: Samson or Mary Guilford

2. For 5 points, What was the name of ship sailed by Captain Bartholomew Gosnold when he became the first Englishman to land in New England?

Answer: Concord

3. For 5 points, on what ship did Peter Minuit arrive in Manhattan?

Answer: Sea Mew

4. For 5 points, what ship carried John Winthrop to the Massachusetts Bay Colony?

Answer: Arbela

5. For 5 points, name either of the two ships that brought the first Catholic settlers to Maryland?

Answer: Dove or Ark

6. For a final 5 points, name either of the two Dutch ships that sailed to Manhattan in 1612 to trade with the Indians.

Answer: Tiger or Fortune.