

1999 Mad City Masters Tournament

The Lawyers of Physics Tossups

(by Eric Reehl, Steve Watchorn, Mark Zimmer)

1. This class of substances was finally considered separate from fermentation, as a group, when German chemist Edward Buchner showed in 1897 that cell-free extracts of yeast could ferment sugars to alcohol and carbon dioxide. J.B. Sumner first isolated one in pure crystalline form when he isolated urease [YUR-ee-ase], in 1926. For 10 points—name these biological catalysts, unconsumed and unaltered by the reactions in which they participate.

answer: enzymes

2. According to a song, members of this organization "are on the take, but what do you expect for the money [they] make? Whether in a car or on a horse, [they] don't mind using excessive force." An apparent prerequisite for joining or leaving this group is to endure ten seconds of derisive laughter before a cordial "welcome aboard" or "sorry to lose you," and the newest members usually get stuck with beats in Junkieville and Bumtown. For 10 points—name this group familiar to the Simpsons, headed by Chief Clancy Wiggum.

answer: The Springfield Police Department

3. Officially known as the Commonweal for Christ, this group of men was organized following the Panic of 1893 to demand that the U.S. government create a national public works program. This group of about 100 men left Maxillon, Ohio on March 25, 1894 and by the time they arrived in Washington, D.C. they numbered over 500. When they reached the Capitol grounds their leaders were arrested. For 10 points—name this group of men named after one of their leaders.

answer: Coxey's Army

4. This city was founded in 808 by Moulay Idriss II in a valley north of the Middle Atlas mountains. One of the world's oldest universities was founded there in 850. By the 14th century it had become a center of learning which drew students from all over the Muslim world and parts of Europe. For 10 points—name this city, which shares its name with the brimless, cone-shaped, flat-crowned hat worn by men in the eastern Mediterranean and by Shriners in the United States.

answer: Fez

5. He was hanged in Alabama for a murder he didn't commit. Unfortunately for him, his alibi was that he was murdering a man in Memphis at the time. Along the way, he also murdered the half-wit Tommy and raped Temple Drake. For 10 points—who is this sinister focus of William Faulkner's *Sanctuary*?

answer: Popeye

6. It is one of the very few musical terms which comes from English. Typically in the form AA BB CC DD, it is closely related to the canon, but is considered intellectually inferior, since all voices enter in unison or on the octave. For 10 points—what is this musical form exemplified by "Three Blind Mice" and "Frere Jacques"?

answer: Round (do not accept "Rondo")

7. Kim Perrot [pare-OH] is absent, battling cancer, putting more pressure on Jennifer Rizotti to run the offense and provide an emotional lift. Kara Wolters and Monica Lamb will battle for starting center, with much of the scoring responsibilities still to fall onto the shoulders of forwards Tina Thompson and Sheryl Swoopes. For 10 points—name this WNBA franchise, led by two-time league MVP Cynthia Cooper, which has won both of the first two WNBA championships.

answer: The Houston Comets (accept either)

8. During its first two and a half years of publication, its cover pictured a huge California grizzly bear. Jack London and Ambrose Bierce were notable among its many contributors, most of whom were Californian. For 10 points—identify this influential literary magazine first edited by Bret Harte, and named for the non-seafaring option for California-bound emigrants.

answer: Overland Monthly

9. Among his best-known portraits are those of Samuel Adams, Paul Revere and Thomas Mifflin. He first gained renown with his 1766 *Boy with a Squirrel*. For 10 points—who was this artist of the massive *Death of Lord Chatham* and the romantic precursor *Watson and the Shark*?

answer: John Singleton Copley

10. His work obtained for him the 1910 Nobel Prize in Physics. By combining the kinetic theory of gases with Laplace's [lah-PLAH-ses] theory of capillarity, he was led to the hypothesis of the continuity of gaseous and liquid states; and in his 1880 theory of corresponding states, he first presented the real gas equation of state now named for him. For 10 points—name this Dutch physicist, for whom the weak attractive forces between molecules are also named.

answer: Johannes Diderik van der Waals

11. A former dean at the University of Chicago Law School, this man has been a member of the U.S. delegation to the UN Human Rights Commission in Geneva and was previously confirmed by the Senate to serve on the U.S. delegation to the UN General Assembly. His recent "recess appointment" by President Clinton to the post of Ambassador to Belgium, bypassing congressional approval, has rankled some congressmen. For 10 points—name this first openly gay U.S. ambassador and critic of the Catholic Church, heir to the fortune of his family's Minnesota-based meat-packaging company.

answer: James C. Hormel

12. His mouth was so large that when he gaped one jaw touched the earth and the other touched heaven. He was one of three monsters who were the children of Loki and the giantess Angerboda. For 10 points—name this mythological Norse monster, whom Odin tried, but failed, to chain, and who is expected to swallow Odin at the day of doom.

answer: Fenris or Fenris-wolf

13. The U.S. Constitutional Convention was deadlocked between two factions. One group favored the Virginia Plan which called for a legislature based on population. The other states

wanted to implement the New Jersey Plan of a legislature with equal representation for each state. Eventually the deadlock was broken. For 10 points—what was the name of this proposal to create a two house legislature with one house's membership based on population and the other's on equal representation?

answer: The Connecticut Compromise

14. He was an Anti-Federalist and a deist, so it was natural that Jefferson would be a friend of his. As editor from 1791 to 1793, he attacked Alexander Hamilton in the *National Gazette*. But he is best known as one of the first American poets of renown. For 10 points—who is this author of Revolutionary War poems, such as "American Liberty," "General Gage," and "The British Prison-Ship"?

answer: Philip Freneau

15. It was first proved by Jakob Bernoulli in a paper published in 1713, though it had been pronounced, in general form, by Isaac Newton in 1676. Directly stated, it says that for any positive integer n , and two numbers a and b , the quantity a -plus- b -to-the- n can be written as the sum of a series of n -plus-1 terms, of the form "coefficient" times a -to-the- n -minus- r times b -to-the- r . For 10 points—name this axiom dealing with sums of two numbers, for which coefficients can be quickly found using Pascal's Triangle.

answer: The binomial theorem

16. Cathy becomes a prostitute. Her husband, Adam, hides the truth from his sons Aron and Cal. When Cal finds out, he uses this information to drive Aron to kill himself. For 10 points—the Trask family is at the center of what modern retelling of the Cain and Abel story made into a film starring James Dean?

answer: East of Eden (by John Steinbeck)

17. Born in 1466, this Italian fought for France in the Italian Wars until 1528 when he went over to Holy Roman Emperor Charles V, for whom he conquered Tunis. He also became the virtual dictator of Genoa and captured Corsica. For 10 points—name this admiral for whom an Italian ocean liner was named, before that liner collided with the *Stockholm*.

answer: Andrea Doria

18. Born in Evansville, Illinois in 1966, he joined an acting troupe while in the second grade. He landed his first film role when he was 17 in the teen sex comedy *Class*. He went on to appear in other teen comedies such as *Sixteen Candles*, *Better Off Dead*, and *The Sure Thing* before moving on to more dramatic roles in movies like *Say Anything* and *The Grifters*. For 10 points--name this actor who recently had a small part in *The Thin Red Line* and starred in *Pushing Tin*.

answer: John Cusack

19. In 329 BC Alexander the Great captured a city then called Maracanda. By the 7th Century it had become a way station on the Silk Road which Marco Polo visited in the 13th Century. In the 14th century Tamarlane made this city his capital and parts of his tomb are still standing there today. The Russians took over in 1868 and made it a provincial capital and railroad center. For 10 points—name this city in Uzbekistan.

answer: Samarkand

20. When asked why he wanted to climb Mount Everest, he responded "because it is there." In 1924 he attempted to climb that mountain and wasn't seen again, although climbing experts long speculated that he may have reached the summit. For 10 points—name this British mountain climber whose body was discovered earlier this year, 2,000 feet from the summit of Mount Everest.

answer: George Leigh Mallory

21. The British army was advancing south from Montreal towards Albany, New York. Their path was blocked by an American army commanded by Horatio Gates and Benedict Arnold. On September 19, 1777 the armies met at Freeman's Farm where the British took heavy casualties. On October 7 the armies fought again at Bemis Heights where the British were again defeated and began a retreat. The British were caught and surrendered ten days later. For 10 points—name this Revolutionary War battle, where General Burgoyne was the losing commander.

answer: The Battle of Saratoga

22. Beginning as melting snow in the mountains of Tibet, this river flows through deep gorges for almost half of its 2,562 mile length. Then, south of Luang Prabang its valley broadens and below Kratie, Cambodia it forms an extensive alluvial plain. For 10 points--what Asian river, after its confluence with the Tonle Sap, forms an extensive delta dominates the whole of extreme southern Viet Nam?

answer: Mekong River

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The Lawyers of Physics Bonuses

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1. Identify the Poe tale from the first line.

A. For 5 points—"The thousand injuries of Fortunato I had borne as best I could; but when he ventured upon insult, I vowed revenge."

answer: The Cask of Amontillado

B. For 10 points—"The mental features discoursed of as the analytical, are, in themselves, but little susceptible of analysis."

answer: The Murders in the Rue Morgue

C. For 15 points—"During the autumn of 18—, while on a tour through the southern provinces of France, my route led me within a few miles of a certain Maison de Sante' or private Mad House, about which I had heard much, in Paris, from my medical friends."

answer: The System of Doctor Tarr and Professor Fether

2. Identify the following psychological tests:

A. For 5 points—the test in which a client relates what pictures are brought to mind by a series of standardized inkblots.

answer: Rorschach test

B. For 10 points—the test developed by Henry Murray, which uses a standard set of ambiguous pictures, about which the client is asked to tell a story.

answer: Thematic Apperception Test or TAT

C. For 15 points—the IQ test most widely given to adults, developed in 1955 and updated in 1981; it is also known by a 4-letter acronym.

answer: Wechsler Adult Intelligence Scale or WAIS

3. Identify the namesakes of these laws of physics, for 10 points each:

A. The law for predicting the outgoing direction of light refracted across a flat boundary between two media.

answer: Willebrord van Roijen Snellius or Snell

B. The rule for predicting the direction of the electric field or current induced by a changing magnetic flux.

answer: Heinrich Friedrich Emil Lenz

C. The principle that the inertial forces experienced by a body in non-uniform motion are determined by the quantity and distribution of matter in the universe.

answer: Ernst Mach

4. You have been charged with murder, and end up in court. Based on a description of events around you, identify the current or defunct television series on which you find yourself, for 10 points each.

A. After an impassioned defense by Lindsay Dole, and another great closing by Eugene Young, you are found not guilty of being The Poet.

answer: The Practice

B. After an appeal and a change of venue, you find yourself staring down the bracing questions of Assistant District Attorney Sherman "Jack" McCoy. Fortunately, you are cleared on a technicality because Detective Briscoe forgot to read you your rights.

answer: Law and Order

C. In a final attempt to nail you, the justice system bends the rules to give you triple jeopardy, but the righteous Preston Brothers (Robert Reed and E. G. Marshall) get you off the hook for good (lucky for you).

answer: The Defenders

5. Egmont was a Flemish general who was from one of the noblest families in Holland.

A. For 10 points—name the duke who had Egmont arrested for treason against the Spanish throne.

answer: Duke of Alba

B. For 10 points—name the Dutch leader who, after Egmont's beheading, expelled the Spanish from the Netherlands and won independence; he was assassinated in 1584.

answer: William the Silent or William of Orange or William I

C. For 5 points each—name the German author who wrote the dramatic tragedy, *Egmont*, in 1788, and the German composer who was commissioned to write an overture and incidental music for the play about 20 years later.

answer: Johann Wolfgang von Goethe, Ludwig van Beethoven

6. 30-20-10. Name the city.

A. Founded by the Saxons in the 7th century, today this English city of 31,000 is best known for its production of automobiles.

B. Almost destroyed by bombing in 1940, this city and its cathedral have been rebuilt.

C. It was in this city that Lady Godiva rode naked through the streets to persuade her husband to ease taxes.

answer: Coventry

7. [VISUAL BONUS] For 10 points each—identify who is represented in these details from the Sistine Chapel ceiling:

- answer: A. Jonah
B. Jeremiah
C. Delphic Sibyl or Sibyl of Delphi

8. 30-20-10. Name the novel.

A. The central character's assistants are named Artur and Jeremias; but they don't have any tools.

B. The main character starts out as a surveyor, but soon becomes a school janitor (and a poor one at that).

C. The central character's name is simply given as "K."

answer: The Castle or Das Schloss (by Franz Kafka)

9. For 10 points each—identify the number of points at which each of these trigonometric functions goes to infinity, in the limit, for a complete cycle (0 to 360 degrees, or 0 to 2-pi radians, including both endpoints):

A. sine

answer: zero

B. tangent

answer: two (at 90 degrees and 270 degrees)

C. cosecant

answer: three (at 0, 180 and 360 degrees)

10. Identify the following related to the Chinese revolution of 1911:

A. For 5 points—the leader of the revolution and briefly the provisional president of the Chinese Republic.

answer: Sun Yat-Sen

B. For 10 points—the last Manchu emperor.

answer: Henry Pu Yi or Hsuan T'ung

C. For 15 points—the name of Sun Yat-Sen's revolutionary league, which later evolved into the Kuomintang party.

answer: T'ung Meng Hui

11. Identify these significant players in the recently-brokered Kosovo peace agreement, for 10 points each:

A. The Secretary-General of NATO.

answer: Javier Solana

B. The President of Finland, one of the chief architects of the deal.

answer: Martti Ahtisaari

C. The Russian Special Envoy who worked closely with the negotiators on both sides, and who failed to be approved last year as Russia's prime minister, despite Boris Yeltsin's support.

answer: Victor Chernomyrdin

12. The NHL began in 1917 with four teams, and eight more joined before 1926. However half of these teams folded, and from 1926 until 1967 the NHL had only six teams. For 5 points each—name these teams which are sometimes, incorrectly, called the original six. Give both the city and team name.

answer: Montreal Canadiens, Toronto Maple Leafs, Boston Bruins, Chicago Blackhawks, Detroit Red Wings, New York Rangers

13. The recent comic book series "The League of Extraordinary Gentlemen" teams up several of Victorian Literature's best known heroes. Identify the following, for 10 points each:

A. In the comic, Hawley Griffin is discovered hiding in a girls' boarding school. This character made his first appearance as the title character in what 1897 H. G. Wells novel?

answer: The Invisible Man

B. Allan Quatermain is first seen in the comic book in a Cairo opium den. He appeared in a series of novels written in the 1800s by what author?

answer: H(enry) Rider Haggard

C. One of the villains of the series is Dr. Fu Manchu, the subject of a series of novels by what author?

answer: Sax Rohmer (or Arthur Sarsfield Wade or Ward)

14. Identify the 1980s film based on its Oscar-winning original song, for 10 points each.

A. "Take My Breath Away"

answer: Top Gun (1986)

B. "Let the River Run"

answer: Working Girl (1988)

C. "Say You, Say Me"

answer: White Nights (1985)

15. Identify these firsts relating to the British crown, for 10 points each:

A. As of 823, he ruled over the Seven Kingdoms of the Heptarchy, but is generally considered the first King of England.

answer: Egbert

B. In 1016, he became the first Danish king of England.

answer: Canute

C. She was the first woman after 1066 to rule as queen in her own right.

answer: Mary I or Mary Tudor or Bloody Mary (grudgingly accept Lady Jane Grey)

16. One top 100 list you may have missed is the *Comics Journals* list of the top 100 comics of the century. From the clues given, name the top 5 from that list, with a 5 point bonus for getting all 5. The clues are in order from number 5 to number 1.

A. 5. A full page color fantasy newspaper comic strip by Winsor McCay which ran from 1905 to 1911 and was revived from 1924 to 1927.

answer: Little Nemo in Slumberland

B. 4. A 1991 Pulitzer Prize winning comic book by Art Spiegelman which told the story of the Holocaust.

answer: Maus

C. 3. A newspaper comic strip by Walt Kelly which ran from 1949 to 1973.

answer: Pogo

D. 2. A newspaper comic strip which began in 1950 and is the only strip in the top five that is still running.

answer: Peanuts

E. 1. A newspaper comic strip by George Herriman which ran from 1913 to 1944.

answer: Krazy Kat

17. 30-20-10. Give the common name.

A. It was the nickname of Khayr al-Din, a Turkish Corsair and Admiral who seized Algiers from Spain in 1578 and placed it and the other Barbary States under Turkish suzerainty.

B. It was the nickname of Frederick I, Holy Roman Emperor from 1155-1190.

C. It was the codename for the German invasion of the USSR in World War II.

answer: Barbarossa

18. Identify the functional class of muscle from a brief description, for 10 points each.

A. A muscle which draws a part of the body toward its median line or toward the axis of an extremity.

answer: adductor (do not accept "abductor")

B. A ring-like muscle surrounding and able to close a bodily passage or opening.

answer: sphincter

C. A muscle which increases the angle between members of a limb, as by straightening the elbow or knee.

answer: extensor

19. 30-20-10. Name the islands from the clues given.

A. First sighted by Dutch sea captain Sebald de Weerdt in 1600, one of these islands was settled by the French in 1764 and another by the British in 1765. The Spanish bought out the French colony and drove off the British in 1770, but under threat of war the British returned in 1771.

B. On December 8, 1914 the German East Asiatic Squadron under Admiral von Spee attacked these islands but was defeated by British ships commanded by Admiral Sir Doveton Sturdee.

C. Argentina seized these islands in 1982 which provoked a brief undeclared war.

answer: Falkland Islands or Falklands or Islas Malvinas

20. During World War II the German military encoded all their important messages using the "unbreakable" Enigma machine. For 10 points each--

A. The Enigma code was first broken in 1932 by a young mathematician named Marian Rejewski [Reh-JEFF-ski], who worked for the intelligence service of what European country?

answer: Poland

B. Rejewski had solved the German Army Enigma, but the much more complex German Naval Enigma remained unsolved until a British mathematician developed a calculating machine called a "Bombe" to decode them. Name this mathematician.

answer: Alan Turing

C. Finally, give the code name the British used for the information learned from the decoded German messages.

answer: Ultra

21. The Romans had several kinds of household gods. For 10 points each—

A. These protective gods are one to a household, and usually are an ancestor defending the family against harm.

answer: Lares [LAHR-reez] or Lar

B. This is the specific Lar which is the founder of the house, who has remained in it to protect the family.

answer: Lar Familiaris

C. Often referenced in connection with the Lares, these gods are more proactive, since they bring benefits and good fortune to the household.

answer: Penates [puh-NAY-teez or puh-NAH-teez]

22. Identify the Dostoevsky work from a central character.

A. For 5 points—Prince Myshkin

answer: The Idiot

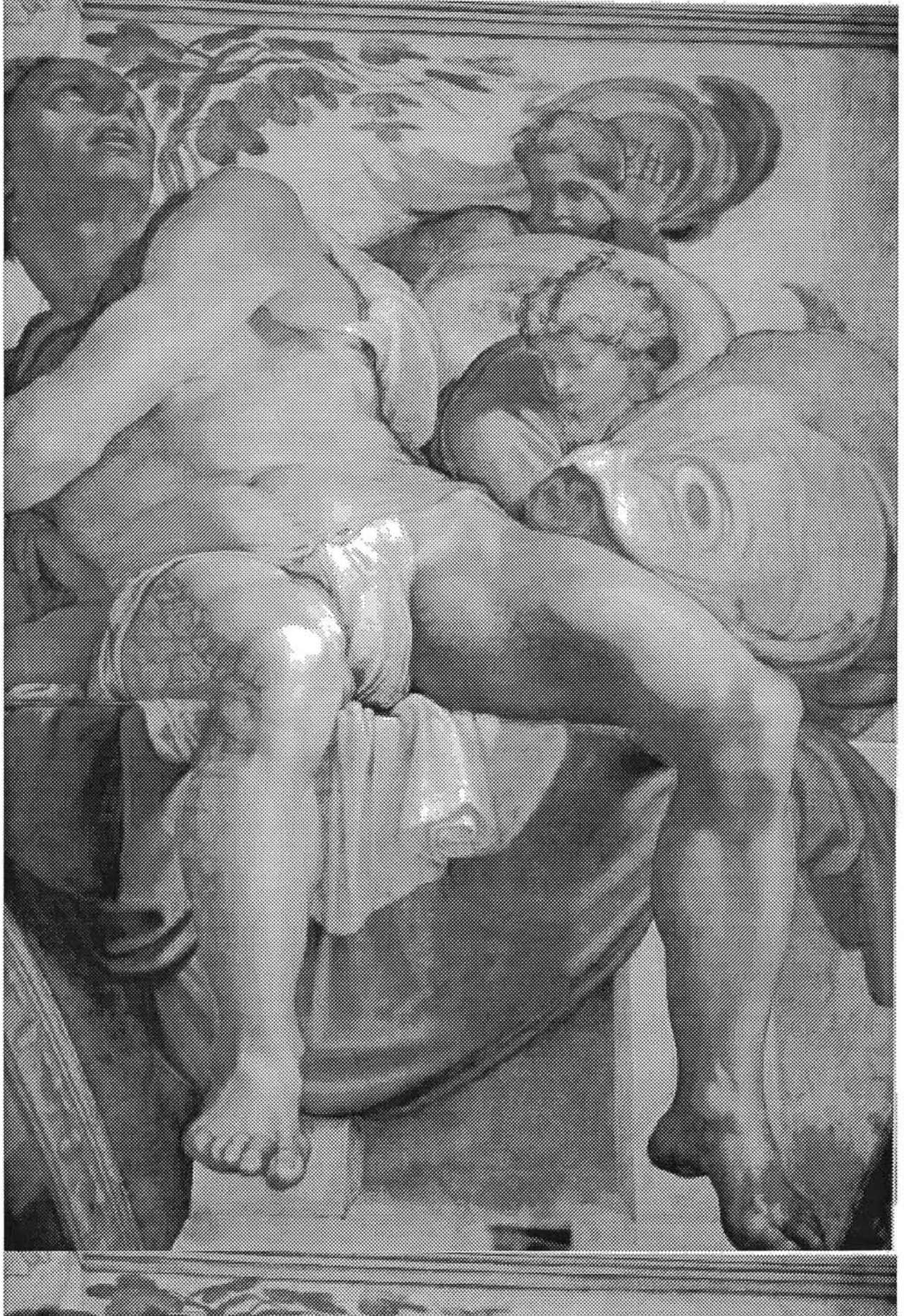
B. For 10 points—Makar Alexeyevich Devushkin

answer: Poor Folk or Bednye Lyudi

C. For 15 points—Foma Fomich Opsikin

answer: Friend of the Family or The Village of Stepanchikovo or Selo Stepanchikovo

A.



B.



C.

