## G.A.T.A. 1993 State Tournament - Round 5

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T1. Pencil and paper ready. In a regular one, the interior angles all measure 144 degrees. For 10 points, what name is applied to these polygons of ten sides?

Answer: decagon
B2. Pencil and paper ready. You have a triangle. Side A is of length 2. Side B is of length 2 times square root of 2 . For 10 points each:

1. What is the length of side C if the angle opposite side C measures 45 degrees?

Answer: $\underline{2}$
2. What is the area of the triangle if angle C is equal to 45 degrees?

Answer: $\underline{2}$
T2. At the outbreak of the civil war, he organized the first Rhode Island regiment and rose to the rank of Major General by 1862. For 10 points, identify this man who was in command of the Army of the Potomac at the battle of Fredericksburg.

Answer: Ambrose Burnside
B2. For 10 points each, identify the following 20th century milestones of labor legislation given a brief description.

1. This 1935 act established the right of workers to organize and participate in collective bargaining

Answer: Wagner Act or National Labor Relations Act
2. This 1947 act restricted some labor practices such as the secondary boycott and the closed shop

Answer: Taft-Hartley Act
T3. This process leads to the formation of a vesicle of fluid surrounded by plasma membrane in cytoplasm. For 10 points, what is this process by which a cell ingests fluid by surrounding it?

Answer: pinocytosis or endocytosis
B3. There are many problems that can result from hormonal imbalances. Identify the gland that is malfunctioning if you have the following hormonal diseases. 5 pts. each.

1. Addison's disease

Answer: adrenal glands
2. acromegaly

Answer: pituitary
3. goiter

Answer: thyroid
4. Cushing's syndrome

Answer: adrenal glands or pituitary

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T4. Primarily a painter, he has become posthumously known as a great sculptor. For ten points, name this French artist who worked in oil, pastel, and bronze in his many attempts. to capture the art of the ballet in still form.

Answer: Edgar Degas
B4. Name the artists who painted the following works for 10 pts. each.

1. Madonna of the Rocks

Answer: Leonardo da Vinci
2. Sleeping Gypsy

Answer: Henri Rousseau
T5. The Wind Among the Reeds, The Land of Heart's Desire, Leda and the Swan, and The Lake Isle of Innisfree are among this author's works. For 10 points, name this winner of the 1923 Nobel Prize in Literature.

Answer: William Butler Yeats
B5. For 10 points each, identify the Elizabethan dramatist who penned the following works.

1. Bartholomew Fair

Answer: Ben Jonson
2. The Jew of Malta

Answer: Christopher Marlowe
T6. This term can refer to any more or less random scattering of particles or materials, but in chemistry it usually refers to the mixing of gases. For ten points, give the term.

Answer: Diffusion
B6. For 10 points each, identify the atom that is oxidized and the atom that is reduced in the following single replacement reaction. You must specify which is which.
Reaction: $2 \mathrm{AgNO} 3+\mathrm{Cu}$ yields $\mathrm{Cu}(\mathrm{NO} 3) 2+2 \mathrm{Ag}$
Answer: Copper is oxidized, Silver is reduced
T7. When he refused to pay his poll tax in order to protest the Mexican War, he was visited in jail by his friend Ralph Waldo Emerson. For ten points, name this American author of A Week on the Concord and Merrimac Rivers who is best known for Walden.

Answer: Henry David Thoreau
B7. Identify the plays for which the following persons won the Pulitzer Prize in the following years. 10 pts. each.

1. 1957, Eugene O'Neill

Answer: Long Day's Journey Into Night
2. 1948, Tennessee Williams

Answer: A Streetcar Named Desire

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Copyright 1993 -Independent Buzzer Association T8. It was the name of the elected legislative body that with the State Council comprised the imperial Russian Legislature from 1906 to 1917. For 10 points, what is this body, four of which met during the reign of Czar Nicholas II.

Answer: duma
B8. Given a brief description of one of Hitler's planned attacks, give the English version of the German code name, 10 pts. each.

1. The naval invasion of Britain

Answer: Operation Sea Lion
2. The invasion of the Soviet Union

Answer: Operation Barbarossa
T9. Pencil and paper ready. You are rolling two standard six-sided dice. For 10 points, what is the probability that if you roll both at the same time, you will roll a twelve?

Answer: 1/36
B9. For the following probability questions assume a standard 52 card deck of cards. Express your answer as a fraction with a numerator of one.

1. For 10 points, without replacement, what is the probability of drawing two queens in a row from a standard deck?

Answer: 1/221
2. For 10 points, without replacement, what is the probability of drawing two diamonds in a row?

Answer: 1/17
T10. The South American country of Argentina is named for the Latin word for silver, but for 10 points, what Mediterranean island nation is named for the deposits of copper mined there in ancient times?

Answer: Cyprus
B10. For 5 points each, give the only two nations that border the following countries.

1. Panama

Answer: Colombia, Costa Rica
2. El Salvador

Answer: Guatemala, Honduras

T11. It is said to have been first built by Adam, who received pardon there 200 years after his expulsion from paradise. It was rebuilt by Ishmael and Abraham after the Flood. For 10 points, what is this holiest shrine of Islam?

Answer: Kaaba
B11. For 10 point each, answer the following questions about the Babylonian "Epic of Gilgamesh".

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1. Name the wild bull-man that the gods created to befriend Gilgamesh. Answer: Enkidu
2. What goddess, when spurned by Gilgamesh, sent the fierce Bull of Heaven to kill him?

Answer: Ishtar or Astarte

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T12. His paintings, drawings, and etchings have been avidly collected since the 17th century. During his Leiden period, he painted many studies of peasants, the elderly, and members of his family. For 10 points, identify this Dutch artist best remembered for "The Night Watch".

Answer: Rembrandt van Rijn

B12. For 10 points each, identify the following female choreographers.

1. She founded her School of Contemporary Dance in 1927 and worked with Aaron Copland. Among her works are Primitive Mysteries, Letter to the World, and Clytemnestra.

Answer: Martha Graham
2. She was a profound influence on Fokhine and Diaghilev. Her choreography was largely improvisational and based on her ideas of classic Greek drama and her emotional response to the music of such great composers as Beethoven, Chopin, and Schubert.

Answer: Isadora Duncan
T13. Pencil and paper ready. For ten points, solve the following equation for x in radians, assuming that $x$ lies between 0 and $p i: \cot (x)=$ minus square root of 3 [cotangent $x$ equals the negative square root of three].

Answer: 5 Pi / 6
B13. Convert the number 23 to the following bases. 5 pts. each.

1. base 5

Answer: 43
2. base $8 \quad$ Answer: $\underline{27}$
3. base 2 Answer: 10111
4. base 7 Answer: 32

T14. In it appear Peter Quint and Miss Jessel, evil ghosts who torment the young children Miles and Flora. For ten points, what is this 1898 novella by Henry James?

Answer: The Turn of the Screw
B14. Identify the 19th century American short stories featuring the following characters for 10 points each.

1. Reverend Mr. Hooper

Answer: The Minister's Black Veil (by Nathaniel Hawthorne)
2. Cherokee Sal and Kentuck

Answer: The Luck of Roaring Camp (by Bret Harte)

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T15. This English chemist and physicist discovered that electrostatic attractions and repulsions are functions of the inverse square of the distance between them. He is best known for his torsion balance with which he measured Newton's gravitational constant and the mass of the earth. For 10 points, name him.

Answer: Henry Cavendish
B15. For 5 points each, identify the following units from electricity.

1. the unit of electric charge

Answer: coulomb
2. the unit of electromagnetic inductance

Answer: henry
3. the unit of capacitance

Answer: farad
4. the unit of potential difference

Answer: volt
T16. It comes into English via Latin but its original source is the Greek for "lame". It is a metrical foot of two syllables, one short, one long in quantitative meter. For 10 points, what is this metrical foot, the most frequently used in English?

Answer: iamb
B16. For 10 points for each correct pair, give the person and number of the following conjugated verb forms in the following languages. For example: English, am would be first person, singular (Reader, please spell the verb forms to the teams)

1. Spanish, tenemos

Answer: first person, plural
2. French, danses

Answer: second person, singular
T17. Land masses formed by glacial deposits sometimes show depressions which are thought to be formed by the melting of underground blocks of ice. For ten points, what term describes such a depression?

Answer: Kettle
B17. Answer the following questions about geological time periods.

1. For 5 points, what era follows the Paleozoic?

Answer: Mesozoic
2. For 5 points, each, what three periods comprise the Mesozoic era?

Answer: Triassic, Jurassic, Cretaceous

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T18. Gunnar Myrdal, Robert Solow, Paul Samuelson, and Robert Coase. For 10 points, in what field have these men won Nobel Prizes?

Answer: Economics (accept winners of the Nobel Prize in Economics on early buzz)

B18. Identify the following American winners of the Nobel Prize in Economics. 10 points each. 1. This man won the 1976 prize for his ideas on monetary policy.

Answer: Milton Friedman
2. This man won the 1978 prize for his "research into the decision-making process within economic organizations".

Answer: Herbert A. Simon
T19. It is found in most terrestrial vertebrates in the middle of the ventral side of the chest and the ventral ends of most ribs are attached to it. For 10 points, identify this breast bone.

Answer: sternum (prompt for more info on early buzz with "breast bone")

B19. Identify these divisions of the plant kingdom for 10 points each.

1. This division of the plant kingdom contains the most primitive forms of plant life, the algae.

Answer: thallophyta or thallophytes or thallobionta
2. This division of the plant kingdom consists of flowerless, vascular plants with roots, stems and leaves. Ferns are included in this division.

Answer: pteridophyta or pteridophytes or polypodiophyta
T20. Its recipients receive, among other things, $\$ 200$ a month for life and free travel on government aircraft to almost anywhere in the world. For 10 points, name this military award, first bestowed upon James Andrews in 1863.

Answer: Congressional Medal of Honor
B20. Given a brief description of the achievements of an American explorer, identify him, for 10 pts. each.

1. He travelled down the Mississippi River with Henri de Tonti around 1680.

Answer: Sieur de La Salle
2. Explored the American West between 1842 and 1846 before becoming a leader of the Republican party.

Answer: John C. Fremont
T21. The kinetochores divide and the chromosomes separate and move toward opposite poles. For ten points, these actions occur in which phase of mitosis?

Answer: Anaphase
T22. The title character is a shy orphan who falls in love with the moody, brooding Edmund Rochester. For ten points, name this novel by Charlotte Bronte.

Answer: Jane Eyre

