

Round 8 1st Section Toss-up Questions

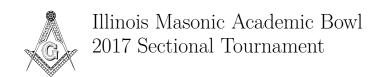
Question #1: Mathematics – Math Concepts

10 points

A type of this kind of structure named for Arthur	<u>table</u> s
Cayley is used to show the results of a group's	
operation. A list showing all of the possible inputs	
for variables that can take on two possible values	
and the corresponding outputs is called the truth	
type of this kind of thing. When looking for	
dependence by using the frequency distributions for	
two variables, the two-way type of this type of	
visualization is used, and it is also called the	
contingency type. Name this concept, similar to	
arrays and matrices, in which data are shown in	
two dimensions — such as the addition and	
multiplication examples used to learn basic	
arithmetic.	

Question #2: Social Studies – U.S. History

This person ordered George Hinkle to negotiate a	Joseph <u>Smith</u>
surrender at Far West but was one of the leaders	
turned over by Hinkle. After receiving	
unsatisfactory replies to his letters to the leading	
candidates, this person tried to run as a third-party	
candidate in the election of 1844, but he and his	
brother Hyrum were killed by a mob before the	
election. This person worked closely with Sidney	
Rigdon, but they were both charged with banking	
fraud and forced to leave Kirtland, Ohio. This	
person was the second mayor of Nauvoo, Illinois.	
Name this person who claimed that the angel	
Moroni [muh-ROH-nye] led him to golden plates,	
which he translated into the Book of Mormon.	



Round 8 1st Section Toss-up Questions

Question #3: Literature – British Literature

10 points

This person wrote a play about a leader who claimed to "hold the Fates bound fast in iron chains", and could "turn Fortune's wheel about". That protagonist killed Calyphas before burning a Koran. This author wrote *Tamburlaine* and a play in which the nun Abigail was poisoned by her father. In that play by this author, Ferneze betrays the protagonist, who ends up falling into boiling water. That play about Barabas is *The Jew of Malta*. Name this writer who used the line "Come live with me and be my love" to open his poem *The Passionate Shepherd to His Love*.

Christopher ("Kit")

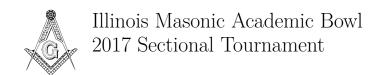
Marlowe

Question #4: Fine Arts – Art History

10 points

A public square in front of this building has a sculpture showing Miliu, a character created by the sculptor Toreski. On the other side of this building is a set of apartments named the architect's "nest". Its Nativity Façade and Passion Façade each have four spires representing apostles. When this building is completed, its Glory Façade will be larger than the other two façades and this building will have 18 spires. This building is expected to become the tallest church building in the world. Name this building that was started in 1882 and is supposed to be completed in 2026, designed by Antoni Gaudí [ahn-toh-nee gow-DEE] in Barcelona.

(Basílica i Temple Expiatori de) la <u>Sagrada</u> <u>Família</u> [or (Basilica and Expiatory Church of the) <u>Holy Family</u> or (Templo Expiatorio de la) <u>Sagrada</u> <u>Familia</u>]



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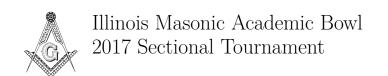
Question #5: Science – Physics

10 points

This quantity is divided by the amount of	$\underline{\mathbf{impulse}}$
propellant consumed to calculate a quantity that	
measures the efficiency of a rocket engine. That	
measure is called the "specific" type of this	
quantity. This quantity equals the integral of force	
with respect to time, which means that for a	
constant force this quantity equals force times time.	
The relationship between this quantity and	
momentum is equivalent to the relationship	
between work and energy. Name this quantity	
defined as the change in momentum.	

Question #6: Literature – World Literature

In this epic, 12 years of exile and a year of	Mahabharata [prompt on
anonymity are bet on a fixed game of dice. In this	$\underline{\textit{Bhagavad-Gita}}$ before
tale, the sole human survivor of a journey up	the end]
Mount Neru refused to enter heaven without his	
dog. The conflict that builds in this tale culminates	
in the Kurukshetra [KOO-rook-SHET-ruh] War. In	
one section of this work, a warrior is advised by his	
charioteer that he must fight his relatives, the	
Kauravas [kaw-RAH-vuhz]. This epic contains an	
alternative version of the <i>Ramayana</i>	
[rah-my-AH-nah] and features the warrior Arjuna.	
Name this Sanskrit epic that contains the	
Bhagavad- $Gita$.	



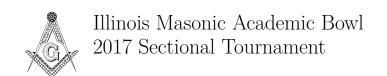
Question #7: Fine Arts – Classical Music & Opera

10 points per part

	a time in the early 19th century, this term was	
usec	d to represent some symphonic pieces not	
atta	ched to a stage performance.	
1	Give this term that usually refers to the	overture(s) [accept
	musical piece that introduces an opera.	concert <u>overture</u> s]
2	Felix Mendelssohn wrote a concert overture for this Shakespeare play. He later added to it to	A <u>Midsummer Night's</u> Dream
	make incidental music for this play that included his Wedding March.	Dream
3	In the mid-19th century, composers such as	symphonic poem s or
	Franz Liszt ["least"] started using this phrase	tone poems [or
	for their symphonic pieces that were based on	tondichtungen or
	literature or art.	$\underline{ ext{symphonische}}$
		$\underline{\mathbf{dichtung}}\mathbf{en}]$

Question #8: Fine Arts – Classical Music & Opera

To o	celebrate the end of the War of the Austrian	
Suc	cession, this composer wrote Music for the	
Roy	al Fireworks.	
1	Name this composer who wrote Water Music	George Frideric Handel
	when King George I wanted a concert on the	[or Georg [GAY-awrk]
	River Thames [temz].	<u>Händel</u>]
	• •	-
2	This Handel oratorio is often performed during	Messiah, HWV 56
	Christmas. It includes the "Hallelujah" chorus.	
3	This Handel anthem is sung at British	$Zadok\ the\ Priest$
	coronations. It is named for a person who	
	helped David and Solomon become kings of	
	Israel.	



Question #9: Mathematics – Geometry

10 points per part

If yo	ou draw all of these segments in a triangle,	
they	divide it into six smaller triangles whose	
area	s are equal.	
1	Give the term for a segment from a vertex of a	median(s) [prompt on
	triangle to the midpoint of the opposite side.	$\underline{\mathbf{cevian}}(s)$
		[CHAY-vee-un(z)]
2	If a triangle is a solid, flat object of uniform	<u>centroid</u>
	density, then the medians all intersect at the	
	center of mass. What is the geometric name for	
	that point?	
3	Suppose that in triangle ABC , the length of	24 units
	the median from vertex A is 36 units. Find the	
	distance between vertex A and the centroid.	

Question #10: Mathematics – Geometry

Cor	responding parts of triangles with this	, , ,
rela	tionship also have this relationship.	
1	Name this relationship that for two segments	congruence or
	means they have the same length, and for two	$\underline{ ext{congruent}}$
	angles means they have the same measure.	
2	It's possible for two triangles to have two pairs	ambiguous case
	of corresponding sides congruent, and a pair of	
	corresponding angles that are congruent, if the	
	those angles aren't between those sides. What	
	name refers to that "case"?	
3	Find the length of the third side of a triangle	$\sqrt{3}$ ["the square $\underline{\text{root}}$ of
	whose other two sides measure 1 unit and 2	3 " or " radical 3 "]
	units, if the angle between the two known sides	-
	measures 60°.	



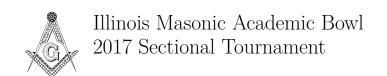
Question #11: Science – Biology

10 points per part

Mos	st organisms fit into this category, but most	
plar	nts and algae do not.	
1	Name these organisms, also known as consumers, that cannot fix carbon and are thus dependent on external energy sources.	heterotrophs ["hetero"-trawffs] [or heterotrophic organisms]
2	This term refers to a heterotroph that gets most of its nutrition by eating meat. These	carnivore(s) [or carnivorous organisms]
3	organisms can be predators or scavengers. This adjective describes animals that are not only carnivorous, but depend on nutrients that	obligate carnivores
	they can <i>only</i> get from eating meat. By contrast, facultative [FAK-ul-tay-tiv] carnivores can survive without meat.	

Question #12: Science – Biology

		, , ,
Mar	ny animals belonging to this class breathe	
thro	ough gills when they are immature, and lungs	
whe	n they are mature.	
1	Name this class that includes frogs and toads.	Amphibia ns
2	This term applies to animals that, unlike	amniotes [AM-nee-"oats"]
	amphibians, are able to lay eggs on land or	[or <u>amniotic</u> organisms]
	keep their eggs within the mother.	
3	This is the common name for amphibians in the	${f salamander}$ s
	order Urodela [yur-oh-DEL-uh]. Many of these	
	animals do not have lungs or gills, so they	
	breathe through their skin and tissues in their	
	mouths.	



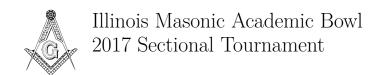
Question #13: Literature – British Literature

10 points per part

In t	his novel, Mr. Guest analyzes handwriting,	
whice	ch helps characters determine the identity of	
one	of the title characters.	
1	Name this tale in which the murder of Sir	Strange Case of Dr Jekyll
	Danvers Carew ["Carey"] is solved by Gabriel	and Mr Hyde [accept an
	Utterson and Mr. Poole.	additional "The" at the
		beginning; prompt on
		Jekyll & Hyde
2	This author wrote Dr Jekyll and Mr Hyde, as	Robert Louis (Balfour)
	well as Treasure Island and Kidnapped.	Stevenson
3	Stevenson's book A Footnote to History	Samoan Islands
	documented the political history of this island	
	group, where he lived at the time.	

Question #14: Literature – British Literature

He i	is called a "bad fencer, but a sound thinker",	
and	describes hell as "a place for the wicked".	
1	Name this womanizer. After leaving hell, he is	Don Juan
	decried as the latest of the Life Force	
	worshipers.	
2	"Don Juan in Hell" is the name for Act III,	George Bernard Shaw
	Scene 2 of this author's play Man and	
	Superman.	
3	In the "Don Juan in Hell" scene, Don Juan has	<u>statue</u> s
	a conversation with Ana and one of these	
	objects representing Ana's father. At the end of	
	Mozart's take on the Don Juan legend, <i>Don</i>	
	Giovanni [dohn joh-VAHN-nee], one of these	
	things drags Don Giovanni to hell.	



Round 8 3rd Section Toss-up Questions

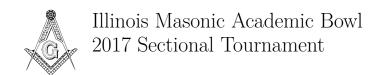
Question #15: Science – Astronomy

10 points

Along with Procyon ["PRO-see-on"], this star is	Sirius
part of both the Winter Triangle and Winter	
Hexagon. This is the brightest star in a	
constellation whose second-brightest star is Adhara.	
After the Sun and Alpha Centauri, this is the	
closest bright star to Earth. In ancient times, it	
was believed that heat from this star caused	
summer heat. This star rises and sets at about the	
same time as the Sun during the "dog days". Name	
this star in Canis Major that is the brightest star in	
the night sky.	

Question #16: Social Studies – U.S. History

This President nominated Judd Gregg to be	Barack (Hussein) Obama
Secretary of Commerce, but they had a	(II)
disagreement and he nominated Gary Locke instead.	
The first bill this President signed, which clarified	
the statute of limitations on pay discrimination	
lawsuits, was the Lilly Ledbetter Fair Pay Act. To	
improve gas mileage, this President signed the Car	
Allowance Rebate System that became known as	
"Cash for Clunkers". The American Recovery and	
Reinvestment Act signed by this President became	
known as the stimulus package. Name this Nobel	
Peace Prize laureate who ordered the raid that	
killed Osama bin Laden in 2011.	



Round 8 3rd Section Toss-up Questions

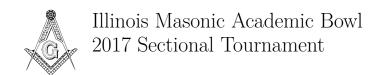
Question #17: Miscellaneous – Popular Culture

10 points

Three of these creatures kill Pyat Pree and Kraznys	$\frac{\mathbf{dragon}}{\mathbf{s}}$
[KRAZ-nis] in Game of Thrones; they consider	
their mother to be Daenarys Targaryen	
[duh-NAIR-iss tar-GAIR-ee-in]. Hiccup Horrendous	
Haddock III trains these animals in a series of	
books by Cressida Cowell. One of these creatures	
named Saphira hatches from a stone in Christopher	
Paolini's Inheritance Cycle. Ron Weasley's brother	
Charlie works in Romania with these creatures.	
Name these mythic reptiles creatures that are often	
able to breathe fire.	

Question #18: Literature – U.S. Literature

This character is given breakfast by Timothy and	Tom Joad [accept Tom;
Wilkie Wallace, who also helped him find a job.	prompt on <u>Joad</u>]
After this character's sister Ruthie reveals his	
location, this person sets off to organize his fellow	
laborers. After serving a sentence for manslaughter,	
this person and Jim Casy require the guidance of	
Muley Graves to find this man's family. His only	
older brother is Noah, and his younger siblings	
include Al, Winfield, and Rose of Sharon. He joined	
up with his family shortly before they began a trek	
to California from Oklahoma. Name this	
protagonist of John Steinbeck's The Grapes of	
Wrath.	



Round 8 3rd Section Toss-up Questions

Question #19: Science – Biology

10 points

The E-F hand motif is found in proteins that bind to this ion. This ion is stored in the sarcoplasmic reticulum [SAR-koh-plaz-mik reh-TIK-yoo-lum], and it is responsible for binding to troponin ["TROPE"-uh-nin] to cause sarcomere [SAR-koh-meer] contraction. Para-thyroid hormone increases levels of this ion in the blood by triggering osteoclast [AH-stee-oh-klast] activity, and levels of this ion are reduced by a hormone produced in the parafollicular [par-uh-fuh-LIK-yuh-lur] cells of the thyroid. Vitamin D helps the body absorb this ion. Name this 2+ ["2 plus"] ion that joins phosphate to form the matrix of bone.

<u>calcium</u> ion [accept Ca^{2+}]

Question #20: Social Studies – World History

10 points

This person suffered a knee injury while stopping a rebellion against Portugal near Azamor in Morocco, but he was then disavowed by Portugal after being accused of profiteering. This person worked closely with Francisco Serrão [sair-AON] in the conquest of Malacca, and he later put João Serrão [zhoh-AON sair-AON] in charge of the ship Santiago while this person commanded the Trinidad. This person died at the Battle of Mactan in the Philippines in 1521. A year earlier, this person entered the Pacific Ocean by sailing through a strait now named for him. Name this explorer who died while making the first circumnavigation of the world.

Ferdinand <u>Magellan</u> [or Fernão de <u>Magalhães</u> or Fernando de <u>Magallanes</u>]



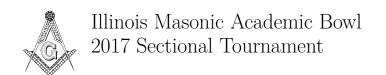
Question #21: Science – Physics

10 points per part

This	s form of energy is often based on the position	
of a	n object.	
1	Name this form of energy that, in a uniform	(gravitational) potential
	gravitational field, can be calculated as mass	energy
	times the strength of gravity times height.	
2	In a central gravitational field, potential energy	1 or first power
	equals the opposite of the gravitational	
	constant, times the products of the masses,	
	divided by distance raised to this power.	
3	In a three-dimensional conservative field, force	gradient
	equals the opposite of this mathematical	
	function of potential energy. This function	
	turns a scalar field into a vector field, using the	
	partial derivatives as the components of the	
	vector.	

Question #22: Science – Physics

This	s fundamental force is mediated by gluons	
["G]	LUE"-ahnz], which have color charge.	
1	Name this force that binds protons and	(residual) strong nuclear
	neutrons within an atomic nucleus.	force [or strong
		interaction]
-		1
2	Gluons are classified as this type of boson	(vector) gauge bosons
	[BOH-zahn], because they mediate a force.	
	Photons, and W and Z bosons, are also this	
	type of boson.	
3	Gluons — like all particles with color charge —	color confinement
	cannot be isolated, which is known as this	
	phenomenon.	



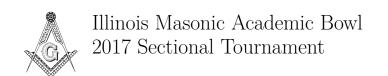
Question #23: Mathematics – Trigonometry

10 points per part

The	ere is more than one way to find the cosine of	
$15^{\circ},$	and it's not always obvious that the answers	
repr	resent the same number, because they	
som	etimes end up written different ways.	
1	One way to calculate the cosine of 15° is to take	half-angle formulas or
	advantage of the relationship between 15° and	half-angle identities
	30°, using one of these trigonometric identities.	
2	If you use that method, you get a square root	3
	within a square root. Give the number that is	
	inside both square roots. Your answer should	
	be an integer.	
3	Another method is to use the fact that 15	4
	equals $45 - 30$ and use an angle-subtraction	
	identity. That method produces $\sqrt{6} + \sqrt{2}$ ["the	
	square root of 6 plus the square root of 2"], all	
	divided by this number. Again, your answer	
	should be an integer.	

Question #24: Mathematics – Trigonometry

This	s fraction of a degree is represented by an	
prin	ne symbol, which looks like an apostrophe.	
1	Name this unit that represents $\frac{1}{60}$ of a degree.	minute
2	Add 5°42′ ["5 degrees, 42 minutes"] plus 7°43′. Simplify your answer, and express it in degrees and minutes.	13°25′
3	How many minutes are equivalent to $\frac{3}{10}$ of a degree?	18 minutes



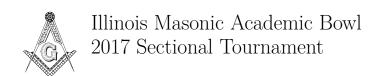
Question #25: Literature – U.S. Literature

10 points per part

The	title of this novel is taken from John Donne's	
[dur	n'z] "Meditation XVII".	
1	Name this novel in which Robert Jordan's leg is	For Whom the Bell
	broken by his horse, but he eventually succeeds	\underline{Tolls}
	in blowing up a bridge.	
2	Name the author of For Whom the Bell Tolls.	Ernest (Miller)
	He also wrote The Old Man and the Sea.	<u>Hemingway</u>
3	For Whom the Bell Tolls takes place during	Spanish Civil War
	this 20th-century war.	[accept answers containing
		<u>Civil</u> War and <u>Spain</u> ;
		prompt on <u>Civil</u> War]

Question #26: Literature – U.S. Literature

	The Devil's Arithmetic, Hannah Stern is asported from modern-day New York to	
	and, where she becomes a victim of this event.	
1	Name this genocide. In a novel by William Styron, Sophie Zawitowska [zah-vih-TAWV-skuh] is forced to decide which of her offspring will survive it.	the <u>Holocaust</u> [or the <u>Shoah</u> ; prompt on references to <u>World War</u> <u>II</u> , death or concentration <u>camp</u> s, or <u>Nazis</u>]
2	This autobiographical work by Elie Wiesel [EL-ee vee-ZEL] describes the town of Sighet being taken over by the Nazis. It was followed by <i>Dawn</i> and <i>Day</i> .	Night [or La Nuit; accept And the World Remained Silent or Un di velt hot geshvign]
3	Wiesel's father dies as they are being transferred from Auschwitz to this concentration camp near Weimar ["VIE-mar"].	Buchenwald [BOO-ken-vahlt]



Question #27: Social Studies – World History

10 points per part

The	ancient Egyptian ruler Amenhotep	
[am·	-in-HO-tep] IV changed his name to	
Akh	nenaten [ahk-uh-NAH-tin] in an effort to	
chai	nge Egyptian religion.	
1	Akhenaten is believed to be the father of this	King Tut ankhamun [or
	pharaoh, whose tomb was found by Howard	<u>Tut</u> ankhaten]
	Carter and George Herbert in 1922.	
2	This woman was the wife of Akhenaten but not	(Neferneferuaten)
	the mother of Tutankhamun. Thutmose	Nefertiti [nef-ur-TEE-tee]
	[thoot-MOH-seh] sculpted a famous bust of this	
	queen.	
3	Akhenaten chose this site as his capital. During	Amarna
	ancient times, this site was called Akhetaten.	

Question #28: Social Studies – World History

Dur	ring this period, several people claimed to be	
the	lost brother of Feodor I; they are now known	
as t	he False Dmitris.	
1	Name this period of Russian history that began	Time of Troubles [or
	with the failed reign of Boris Godunov.	Smootnoye Vremya]
2	The False Dmitris claimed to be the youngest son of this ruler, who declared himself Tsar of All Russia. The English translation of his name makes him seem worse than he actually was.	Ivan the Terrible [or Ivan IV Vasilyevich or Ivan Grozny; prompt on Ivan]
3	The Time of Troubles ended in 1613 when this 16-year-old was made tsar.	Michael I Romanov



Round 8 5th Section Toss-up Questions

Question #29: Mathematics – Math Concepts

10 points

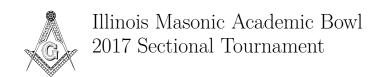
In this type of quadrilateral, the products of the	trapezoid [or trapezium]
sines of opposite angles are equal to each other.	
Additionally, these shapes have two pairs of	
adjacent angles whose cotangents add to zero. The	
average of the left and right rectangle	
approximations for an integral equals the	
approximation named for this shape. Like triangles,	
some of these quadrilaterals are classified as	
isosceles ["eye"-SAH-suh-leez]. The area of one of	
these quadrilaterals equals the height times the	
average length of the two bases. Name these	
quadrilaterals in which one pair of opposite sides is	
parallel.	

Question #30: Literature – World Literature

10 points

The narrator of this story finds "every branch of public service" to be irritable. In this story, which is in the collection *Petersburg Tales*, a calendar proved fruitless in naming the protagonist, since his mother rejected the names Trifily, Dula, and Varahasy. The title object in this story, which was stolen after the protagonist was hit with a fist the size of a man's head, was made by the one-eyed tailor Petrovitch. Name this work about Akakiy Akakievitch's [ah-KAH-kee ah-KAH-kee-uh-vich'z] desire to obtain the title piece of clothing, a story written by Nikolai Gogol.

"The <u>Overcoat</u>" [or "The <u>Cloak</u>" or "Shinel"]



Round 8 5th Section Toss-up Questions

Question #31: Social Studies – U.S. History

10 points

This president signed the Hart-Celler Act that	Lyndon B(a
eliminated the national origins quotas for	[or LBJ]
immigrants, and he also made the food stamp	
program permanent. He nominated a Supreme	
Court justice who was later accused of bribery, Abe	
Fortas, and the first African-American justice,	
Thurgood Marshall. Medicare and Medicaid were	
both started under this president, and those	
programs along with civil rights and voting rights	
legislation were part of his Great Society agenda.	
Name this president during the escalation of the	
Vietnam War, who gained the office after the	
assassination of President Kennedy.	
	1

Lyndon B(aines) **Johnson** [or **LBJ**]

Question #32: Science – Chemistry

10 points

This is the most abundant element in cryolite
["cry-oh-light"], where it combines with aluminum
and sodium. The acid containing one atom of this
element and one atom of hydrogen interferes with
the body's ability to use calcium, making it toxic to
touch, though it is used to etch glass. A compound
whose molecules have six atoms of this element is
used to enrich uranium. Neil Bartlett made the
first noble gas compound of xenon with platinum
and this element. This element combines with
carbon in Teflon. Name this most electronegative
element, a halogen whose anion [AN-"eye"-on] is
used in toothpaste.

fluorine [accept **F**; do not accept "fluoride"]



Round 8 Extra Section Toss-up Questions

Extra Question #1: Mathematics - Math Concepts

10 points

This solid has the same number of vertices as an octahedron [ahk-tuh-HEE-drun], but only nine edges. If each of its edges is unit length and its angles are as regular as possible, then its surface area is 3 plus $\frac{1}{2}$ the square root of 3, and its volume is $\frac{1}{4}$ the square root of 3. This solid has six vertices and five faces; of those faces, three are parallelograms, and usually they are rectangles. This shape's area can be found by calculating the area of the two bases and adding those to the areas of the three faces. Name this type of prism whose bases have as few sides as a polygon can have.

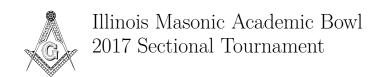
triangular prism [accept
triangle prism; prompt
on prism]

Extra Question #2: Fine Arts – Art History

10 points

One of the first buildings designed by this architect, featuring a prominent cupola that gives a view of the Bodleian Library next door, is the Sheldonian Theatre. A monument consisting for the most part of a Doric column with a staircase inside designed by this architect is both 61 meters high and 61 meters from a historical site in Pudding Lane. Ludgate Hill is the location of one of the many churches this person designed. That church, featuring a colonnade around its large dome, was designed by this architect, like many of his works, after the Great Fire of London. Name this architect of St. Paul's Cathedral.

Christopher Wren



Round 8 Extra Section Toss-up Questions

Extra Question #3: Literature – World Literature

10 points

This group is loved by the Muses, Pan, and Apollo, and is "in love with the ever-plunging tunes". When they are introduced by Charon, they are compared to swans. This group is pulled around on a boat as they sing, and they sarcastically call Dionysus "a doer of many things" before disappearing. These animals sing a chorus that includes the line "bre-ke-ke-kex ko-ax ko-ax." Name these amphibians in an Aristophanes play.

the <u>Frogs</u> [or <u>Batrachoi</u>; prompt on the <u>chorus</u>]

Extra Question #4: Science – Biology

10 points

This phenomenon's interaction with P680 initiates an electron transport chain containing a plastocyanin [plas-toh-"SIGH"-uh-nin]. Auxins [AWKS-inz] are more concentrated in parts of a plant that this phenomenon does not reach, causing plants to grow in a way that bends toward this phenomenon. Oxygen evolution occurs in response to this phenomenon, which is absorbed through the excitation of chlorophylls [KLOR-oh-"fills"]. The Calvin cycle is a series of reactions known for not needing this phenomenon to occur. Plants use carbon dioxide, water, and this phenomenon to produce energy. Name this phenomenon that triggers photosynthesis.

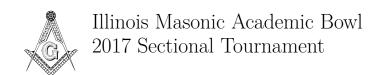
sunlight or visible light
[accept photons; accept
electromagnetic
radiation or
electromagnetic waves or
EM radiation or EM
waves]



Round 8 Extra Section Toss-up Questions

Extra Question #5: Social Studies – World History

The first leader of this organization got the position	United Nations or U.N.
after losing an election for a lesser office to	
Paul-Henri Spaak ["Paul" awn-ree spahk]. In 1975,	
this organization passed a resolution stating	
"Zionism is a form of racism." This organization	
controls the International Labour Organization,	
which won the 1969 Nobel Peace Prize. During a	
1960 speech by Lorenzo Sumulong [soo-MOO-long]	
at the headquarters of this organization, Soviet	
Premier Nikita Khrushchev took off his shoe and	
banged it on a table. This organization's first	
leader was Trygve Lie [TRIG-vee lee]. Name this	
group with a Security Council and a General	
Assembly, whose membership includes most of the	
world's countries.	



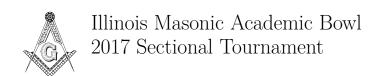
Extra Question #6: Science - Physics

10 points per part

This	s person built the air pumps that Robert Boyle	
usec	l to develop Boyle's law.	
1	Identify this scientist whose namesake law states that the restoring force exerted by a spring is proportional to displacement.	Robert <u>Hooke</u> [accept <u>Hooke</u> 's law]
2	Hooke's law can be used to prove that — if you ignore friction — a mass on a spring will exhibit this kind of motion.	simple harmonic motion [or simple harmonic oscillation; prompt on partial answers; prompt on SHM or SHO]
3	A more complicated form of Hooke's law is necessary for anisotropic ["an-eye-so-tropic"] materials, which are materials whose properties are different depending on what property of the force applied to them?	direction(ality)

Extra Question #7: Science – Physics

Of t	the twelve fundamental particles that are	
fern	nions [FUR-my-ahnz], six are quarks and six	
are	these particles.	
1	Name this class of particles, including the three	<u>lepton</u> s
	types of neutrinos [noo-TREE-nohz].	
2	After neutrinos, the lightest leptons are these	<u>electron</u> s
	negatively-charged particles. Their location in	
	atoms is modeled in terms of orbitals.	
3	The heaviest leptons are tau particles, which	pion s [or pi mesons]
	decay very quickly and often create these	
	particles. These particles are the lightest	
	mesons.	



Extra Question #8: Social Studies - World History

10 points per part

This	s country's so-called confederation occurred	
with	the passage of the British North America Act	
by I	Britain in 1867.	
1	Name this large country that started out with	<u>Canada</u>
	four provinces, and now consists of ten	
	provinces and three territories.	
2	This person became the first prime minister of	John (Alexander)
	Canada in 1867. He was voted out of office	<u>Macdonald</u>
	after his party was involved in a bribery	
	scandal, but later returned to power.	
3	This easternmost province became the most	Newfoundland and
	recent addition to Canada in 1949. In 2001, its	Labrador
	official name was changed to include Labrador.	

Extra Question #9: Social Studies – World History

This	s explorer worked with Vasco Núñez de Balboa	
[VA	HSS-koh NOON-yez day bahl-BOH-ah] in	
Pan	ama, but he later arrested Balboa, and Balboa	
was	beheaded.	
1	Name this Spanish <i>conquistador</i> who then went	Francisco Pizarro
	to Peru, where he captured and killed	(González)
	Atahualpa [ah-tuh-WAHL-pah].	
2	Atahualpa was the leader of this civilization.	<u>Inca</u> n civilization or <u>Inca</u> s
	A. 1 1 . 1 . 1 . 1 . 1 1 1	(T + : C + II - II -)
3	Atahualpa gained full control over the Incan	(Inti Cusi Huallpa)
	Empire by defeating this man, his half-brother.	<u>Huáscar</u>