

Vanderbilt Quiz Bowl
Fall Collegiate Invitational

Round 4

Tossups

1. It is given by the formula $d\mathbf{B} = \frac{\mu_0}{4\pi} \frac{q \, d\mathbf{s} \times \mathbf{r}}{r^3}$. It is an inverse (*) square law used to calculate the net magnetic field \mathbf{B} produced at a point by various distributions of current. FTP, identify this electromagnetic law named for two Frenchmen.

Answer: _Biot-Savart_ Law

2. Born in 1713, his London store bore the odd slogan "Trade & Plumb-Cake For Ever, Huzza." He broke into the printing (*) business with 1744's *Little Pretty Pocket Book*. Best known for publishing such works as *Goody Two-Shoes*, FTP, identify the namesake of Frederic Melcher's children's book award.

Answer: John _Newbery_

3. Born in South Africa, his little sister nicknamed him "Mr. Anus" for his streams of fecal jokes. His self-released debut, 1993's (*) *Remember Two Things*, led to major record contracts and collaboration with Tim Reynolds. FTP, whose band has produced electrifying hit songs like "Tripping Billies" and "Satellite"?

Answer: Dave _Matthews_

4. His first major act was to secure the removal of Cardinal Granvelle, and he later formed the Gueux – the (*) "Beggars of the Sea." Assassinated in 1584 by Balthazar Gérard, a Catholic extremist, he was known as "the silent." FTP, name this early Dutch leader.

Answer: _William I_ Prince of Orange (prompt on: William of Orange)

5. No terms are distributed in an I-proposition. Universal propositions distribute their subject terms. (*) Negative propositions distribute their predicate terms. The predicate of the conclusion is the major terms; its subject is the minor term. FTP, what logical construct consists of two premises and a conclusion?

Answer: categorical _syllogism_

6. Defined as the energy required to increase the surface area isothermally by one square meter, it is measured in Newtons per meter. Symbolized by a lower-case (*) gamma, it results because external molecules are only affected by forces from molecules below them. FTP, name the property that causes soap bubbles and menisci.

Answer: _surface tension_

7. His case was documented in an article entitled "Conditioned emotional reactions" in the *Journal of Experimental Psychology*. The son of a wet nurse at the *Harriet Lane Home for Invalid Children*, (*) he was 11 months old at the time of the experiment. FTP, name the child conditioned by John B. Watson to fear small animals and fluffy white things.

Answer: _"Little Albert"_ or _Albert B._

8. The "Emerald Mile," along the Coastal Trail, offers the park's finest hiking opportunities. Established in 1968, it comprises 110,000 acres to the west of the (*) Klamath Mountains. Named for the fastest growing conifer in North America, sequoia sempervirens, FTP, what is this northern California national park?

Answer: _Redwood_ National Park

9. Adapted by Tennessee Williams into "The Notebook of Trigorin," it was premiered in 1896. The tubercular Sorin provides comic relief while wanna-be actress Nina and (*) wanna-be playwright Konstantin Trepliov fail to build a romance. FTP, name the symbolic animal Trepliov kills and you've named this Chekov play.

Answer: *The _Sea Gull_ or _Chaika_*

10. **Between 1949 and November 24, 1963, he was arrested eight times. Several of the citations were for violating state liquor laws, while others were for indecent performances at the “Carousel (*) Club,” his strip joint. However, by far his most famous crime was murder. FTP, name the Dallas native who shot Lee Harvey Oswald.**

Answer: *Jack _Ruby_*

11. **Founded in 1904 by William Moore, it boasts 1 member of the European Parliament and 10 members of its national government. Its June refusal to nominate (*) cabinet officials may have derailed the Good Friday Accords. FTP, David Trimble heads which Northern Ireland Protestant party?**

Answer: *_Ulster Unionist_ Party*

12. **Snatched from the burning funeral pyre of his mother Coronis by his father Apollo, he was a favorite of Athena, who gave him a gift of Gorgon’s (*) blood. His sons, Podaleirius and Machaon, inherited the talents he honed while studying under Chiron. FTP, name this mythic Greek doctor.**

Answer: *_Asclepius_*

13. **Born in 1818, he opened a successful pawn shop in Nottingham. In 1865, he founded a group known as the Christian Revival Association, and later described its workings in the book (*) *In Darkest England and The Way Out*. FTP, name the man whose brainchild was re-christened in 1878 as the “Salvation Army.”**

Answer: *William _Booth_*

14. **Used for communication by slime molds and a necessary element in the transcription of catabolite-repressive operons in bacteria, (*) this compound is formed when adenylyate cyclase acts on ATP. FTP, name the “secondary messenger” that mediates the effects of animal hormones.**

Answer: *_cyclic adenosine monophosphate_ or _cyclic AMP_ or _cAMP_*

15. **The “Gong of Fate” opens the competition, and Ota Shinichiro gives semi-comprehensible sideline reports. The host, Takeshi Kaga, (*) introduces the two challengers and the defending champ, who use mystery ingredients to make twisted dishes. FTP, name this popular Japanese cooking show.**

Answer: *_Iron Chef_*

16. **Reaction to its passage prompted the rise of the “Faustrecht” movement – a powerful provincialism that led to the revival of the Rhine League. By its terms, three archbishops, (*) the Count Palatine of the Rhine, the Duke of Saxony, the Margrave of Brandenburg, and the King of Bohemia were designated as “electors.” FTP, name the 1356 declaration that set the internal structure of the Holy Roman Empire.**

Answer: *_Golden Bull_*

17. **Wierdos like Blicero and Weissman populate its pages, as well as reverences to – of all things – Porky Pig. Its main character underwent rigorous testing as an infant that – via frequent erections – (*) let him guess where German V2 rockets will land. FTP, name Thomas Pynchon’s convoluted novel about Tyrone Slothrop.**

Answer: *_Gravity’s Rainbow_*

18. **The outside of this triptych represents the pilgrimage of Everyman. When opened, the left panel shows the expulsion of Adam and Eve and insect-like (*) angels swarming from heaven. The right features the burning city of hell, while the center shows the chaotic procession of a large cart. FTP, name the Bosch triptych that shares its name with a river-crossing scene by Constable.**

Answer: *The _Haywain_*

19. **The Lucas-Lehmer Test is used to search for this type of number, and the largest has been found by the web-based (*) GIMPS program. Only 37 have been discovered, and all have the form $2^n - 1$. FTP, identify this type of prime number, named for a French monk.**

Answer: (Marin) _Mersenne_ prime

20. **Faenius Rufus, Petronius, Lucan, Britannicus, Agrippina, Octavia, and (*) Seneca** all met their ends at the hands of this ruler. He dispatched Vespasian to put down a Judean rebellion, and committed suicide to allow Galba to ascend the imperial throne. FTP, who watched the 64 AD fire in Rome?

Answer: _Nero_ (before "Britannicus" accept: _Piso's conspiracy_)

21. **Its composer created the score for his two young nieces' puppet theater, and its characters include the Sandman, the Dew Fairy, and a colorful old (*) hag.** Its libretto, by the children's mother, Adelheid Wette, was based on a story by the Brothers Grimm. FTP, name this Engelbert Humperdinck opera.

Answer: _Hänsel und Gretel_ or _Hansel and Gretel_

22. **Its 930 feet of depth supported the Kanem Empire on its banks in the 19th century. However, its primary feeder, the Chari River, can (*) no longer meet its needs.** As a consequence, its two basins have shrunk to a mere 25 feet in depth. It borders five nations. FTP, name this central African lake.

Answer: Lake _Chad_

23. **Justices cited the Establishment Clause, applied to the states by the 14th Amendment, as the rationale for overturning the New York Court of Appeals decision. A companion ruling, (*) School District of Abington Township v Schempp,** made it illegal for schools to require students to say the Lord's Prayer. FTP, name the 1962 case that ruled against school prayer.

Answer: _Engel v Vitale_

24. **The name derives from Acts VIII, 9-24. It can include things as seemingly insignificant as oral commendation as well as the more typical transfer of (*) money.** Pope Julius II declared all papal elections tainted with it to be invalidated. FTP, what is the practice of buying or selling church offices or other sacred things?

Answer: _simony_

25. **Founded by a Hanbali law student, this movement opposed "extraneous" Islamic traditions and held particular contempt for European ideas. Its adherents referred to themselves as (*) muwahhidun – "unitarians" – but are more commonly known by their founder's name.** FTP, name this 18th – 19th century Islamic reform movement that began in present-day Saudi Arabia.

Answer: _Wahhabi_ movement or _Wahhabites_ (derived from founder: Muhammad ibn Abd al Wahhab)

Accept early: _muwahhidun_

26. **Her quick wits allowed her to kill a frightening ogre. Although she gives gifts like rabbits and pheasant to the king in the name of the fictional Marquis (*) Carabas, her real name is Grimalkin.** FTP, name the feline heroine of a story by Charles Perrault.

Answer: _Puss in Boots_ (accept early: _Grimalkin_)

27. **Its thin composite frame is heat-shielded by layers of Q-fiber and Nomex honeycombed polymers, and will be tested at Haystack Butte at Edwards Air Force Base. Once completed, it should (*) drop the \$10,000 needed to rocket a pound of payload into low earth orbit to a mere \$1,000.** FTP, name the upcoming single-stage-to-orbit NASA/Lockheed Martin shuttle.

Answer: _X-33_

28. **The 1999 season proved quite pleasant – Coach Tom Fitzgerald signed a two-year contract extension, defenseman Tom (*) Dooley rejuvenated his career, and star striker Stern John was among the league's top goal scorers.** FTP, name Columbus' Major League Soccer team.

Answer: Columbus _Crew_ (accept early: _Columbus_)

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Bonuses

1. Name these early blues legends from songs FTP each.

"Kindhearted Woman Blues," "Sweet Home Chicago"

Answer: Robert _Johnson_

"The Killing Floor," "Smokestack Lightning"

Answer: _Howlin' Wolf_

"Prayer of Death," "Poor Me"

Answer: Charley _Patton_

2. Answer these questions about the Book of Acts, 5-10-15.

5 – Chapter 2 begins with this event, where the apostles were granted the ability to speak in tongues.

Answer: _Pentecost_

10 – He ordered Stephen stoned, but later converted to Christianity in dramatic fashion.

Answer: _Saul_ or _Paul_

15 – He violated the principle of communality among the early disciples by keeping some money aside for himself. This man died after a tongue-lashing by Peter, but a man of the same name later restored Paul's sight.

Answer: _Ananias_

3. Identify these types of matrices FTP each.

Matrix a has this relationship with matrix a' (read: a prime) if a_{ij} (read: a sub i comma j) = a_{ji}' (read: a sub i comma j prime)

Answer: _transpose_ matrix

This is a diagonal matrix with all diagonal elements equal to 1.

Answer: _identity_ matrix

This is a square matrix equal to the opposite of its transpose.

Answer: _skew-symmetric_ matrix

4. FTP each:

This Canadian poet wrote about the frontier in collections like *Rhymes of a Rolling Stone* and *The Spell of the Yukon* from his home in Dawson City.

Answer: Robert _Service_

This poem's central figure sits in the back of the bar pining over "Lou" but ends up "pumped full of lead."

Answer: "The _Shooting of Dan McGrew_"

This poem focuses on a Tennessee native who freezes – and then "sizzles" – on Lake LeBarge.

Answer: "The _Cremation of Sam McGee_"

5. FTP each, identify these stock-trading terms.

This is the total value of a trader's open contracts in a commodity.

Answer: _position_

This is the act of buying futures contracts so as to protect one's position against possible increased costs of commodities.

Answer: _hedge_ (accept: _short the basis_)

This is the simultaneous purchase (or sale) of futures positions in consecutive months.

Answer: calendar _strip_

6. For fifteen points each, name these 20th century Caribbean politicians.

Trained by U.S. Marines, he was President of the Dominican Republic 1930–38 and 1942–52.

Answer: Rafael Leonidas _Trujillo_ Molina

This Haitian President from 1957-71 used his special thugs, the Tonton Macoutes, to solidify his hold on power – and possibly to engineer the assassination of his rival Trujillo.

Answer: François Duvalier_ or “Papa Doc” Duvalier_ (prompt on just Duvalier – his son Jean-Claude ruled Haiti as well)

7. Follow the odyssey of a hard-luck American diplomat for fifteen points per answer.

On August 4th, the Senate confirmed man to fill the long-vacant position of Ambassador to the U.N.

Answer: Richard _Holbrooke_

This Iowa Republican, who instituted his hold in the attempt to win support for Linda Shenwick, a demoted State Department whistle-blower, was the last to drop his hold.

Answer: Sen. Charles _Grassley_

8. As much as I’m sure you hate to watch romantic comedies, you’ll still have to name these Hugh Grant films from the twit’s occupation, 5-10-15.

5 – bookstore owner

Answer: *Notting Hill*_

10 – his only apparent occupation is pining for Andie MacDowell

Answer: *Four Weddings and a Funeral*_

15 – pianist

Answer: *Impromptu*_

9. Name these Russian rulers of the Middle Ages FTP each.

Give either the regnal number or the nickname of the wealthy Muscovite prince who reigned from 1328-1340.

Answer: Ivan I _Kalita_ or Ivan I _Kalita_ or Ivan I _Moneybags_

This famous prince reigned from 1236 – 1263 cozied up to the Golden Horde and turned his attention west, where he kicked Teutonic ass at the Battle of Lake Peipus.

Answer: Alexander _Nevski_

The first real national sovereign of Russia, he subjugated Novgorod and deported troublesome nobles to central Russia. After marrying Sophia Palaeologus, he rebuilt the Kremlin.

Answer: Ivan III_ or _Ivan the Great_

10. Answer these related astronomy questions FTP each.

Compiled between 1752 and 1788 by a French astronomer, it is a list of approximately 100 diffuse objects that were difficult to distinguish from comets.

Answer: (Charles) _Messier_ catalogue

This object in the catalogue, M76, has two NGC numbers: 650 and 651. It has attracted secondary nicknames like the “Cork” nebula and the “Butterfly” nebula.

Answer: Little Dumbbell_ or _Barbell_ nebula

This galaxy, M81, is named for the astronomer who contributed both an orbit law and a huge library to science.

Answer: _Bode’s_ Galaxy

11. Answer these questions about a contemporary architect FTP each.

From his home base in Italy, nicknamed the “Punta Nave,” this architect created designs for the Tjibaou Center in New Caledonia, a Sydney office building with a huge translucent sail, and Berlin’s Potsdamer Platz.

Answer: Renzo _Piano_

This Piano-designed Parisian museum has external plumbing painted in bright primary colors.

Answer: _Centre Pompidou_ or George _Pompidou Center_ (prompt on: _Beaubourg_)

His huge San Nicola Stadium, built for this event in Bari, Italy, looks like a big flying saucer.

Answer: 1992 _World Cup_

12. Given two cities on its route, name the Chinese river FTP each.

Lanzhou, Baotou

Answer: _Huang_ He or _Yellow_ River

Wuhan, Shanghai

Answer: Chang_He or Yangtze_River

Guangzhou, Hong Kong

Answer: Pearl_River or Zhujiang_River

13. Answer the following questions about a step of cellular respiration FTP each.

This compound is oxidized into acetate before the citric acid cycle can begin.

Answer: pyruvate_

In the process, this group is removed from the pyruvate molecule.

Answer: carboxyl_group (chemical symbol: COOH)

This coenzyme is added to finish the process.

Answer: coenzyme A_ or coA_

14. Name these dynamic duos of the year 1804 for five points each.

They headed up the Ohio River on August 31st.

Answer: Meriwether_Lewis_ and William_Clark_

This duo shot it up in a famous duel at Weehawken, New Jersey on July 12th.

Answer: Aaron_Burr_ and Alexander_Hamilton_

These two judges – one an insane New Hampshire federal district judge and the other an associate justice of the Supreme Court – were impeached.

Answer: Judge John_Pickering_ and Justice Samuel_Chase_

15. For fifteen points each:

This group of German philosophers, associated with the Institute for Social Research, included Max Horkheimer and Walter Benjamin.

Answer: Frankfurt_School

This 1964 book by Herbert Marcuse worries about the problems of hyper-industrialization in the Hegelian style characteristic of the school.

Answer: One Dimensional Man_

16. 5-10-15:

5 – A spy for King Charles II, she was the first professional English woman author.

Answer: Aphra_Behn_

10 – Her most famous book details the plight of this Negro prince from Suriname.

Answer: Oroonoko_

15 – Give her pen name.

Answer: “Astraea”_

17. Identify the musicians who wrote compositions inspired by artists FTP each.

While not writing nationalist tone poems about Rome, he composed a trio of works inspired by Sandro Botticelli paintings.

Answer: Ottorino_Respighi_

He wrote an opera about the life of flamboyant Florentine sculptor Benvenuto Cellini.

Answer: Hector_Berlioz_

This Spaniard is best known for a series of piano pieces, later turned into an opera, entitled *Goyescas*.

Answer: Enrique_Granados_

18. FTP each:

This German satiric poet is best known for a reworking of the Lorelei story. He spent his last eight years bedridden with a spine disease.

Answer: Heinrich_Heine_

He moved to France to study with this socialist philosopher.

Answer: Claude_Saint-Simon_

The Prussian government condemned him in absentia as a head of this literary group. However, he actually had little to no involvement with it.

Answer: Junges Deutschland_ or Young Germany_

19. FTP each, answer these questions about the US in the early 1960s.

On July 20th, 1960, the first of this class of missile was launched from a submerged submarine.

Answer: Polaris

The March 11th, 1965 death of this white minister beaten during the Selma demonstration three months earlier caused widespread protests in Montgomery.

Answer: Rev. James J. Reeb

In July of 1964, a NASA spacecraft from this program took a series of high-resolution photographs of the moon's surface before crashing into the lunar dust.

Answer: Ranger VII

20. Name these discoveries of 1845 FTP each.

Scotsman Robert Thomson patented this invention.

Answer: rubber tire

Carl Virchow was the first to accurately describe this cancer of the white blood cells.

Answer: leukemia

Edgar Allan Poe attempted to solve this astronomical paradox by postulating an infinitely old universe.

Answer: Olbers' paradox

21. For fifteen points each, name these sociologists.

This Englishman traced the evolution of jurisprudence in his 1861 survey *Ancient Law*.

Answer: Sir Henry (James Sumner) Maine

In the 1890s, this Maine native both published the first sociology journal and founded the first sociology department, at University of Chicago.

Answer: Albion Woodbury Small

22. FTP each:

This Egyptian goddess, wife of Horus, was the parallel of Aphrodite.

Answer: Hathor

Hathor had the head of this seemingly unromantic animal.

Answer: cow

Later, she became identified with this tree, which acted as a ladder to the heaven.

Answer: sycamore

23. Name these 19th century architects FTP each.

This Belgian's designs led to the formulation of the Art Nouveau movement.

Answer: Victor Horta

Horta began to create the swerving shapes characteristic of the Art Nouveau movement after a visit to this nation.

Answer: Japan (or Nippon or equivalent)

This illustrator popularized the movement with his posters for friends like Oscar Wilde.

Answer: Aubrey Beardsley

24. In the words of Richard Clerihew Bentley, he "lived under the odium of having discovered sodium." FTP, each...

Name this British chemist.

Answer: Sir Humphrey Davy

He invented a new variety of headgear that significantly reduced fatal explosions for this type of worker.

Answer: (coal) miners

This compound, known in the shafts as "firedamp," caused the fires before Davy's gauze-covered lamp/helmet caught on.

Answer: methane

25. Name these early European cultures FTP each.

Flourishing around 1350 BC, this Germanic Bronze Age culture derives its name from its peculiar cemeteries.

Answer: _Urnfield_ culture

These metal-workers from Asia Minor settled in northern Italy around 900 BC.

Answer: _Etruscans_

For about 200 years following 700 BC, this Austrian culture provided salt and ironworks for much of eastern Europe.

Answer: _Hallstatt_ culture

26. FTP each:

What French composer lived from 1561-1633?

Answer: Jacapo _Peri_

His *Dafne* was the first of type of composition.

Answer: _opera_

This opera, performed after the marriage of Henry IV of France and Marie de' Medici, was based on Greek themes.

Answer: _Euridice_

27. FTP each, given a casino, name the city it is located in. You can only answer a city once.

Foxwoods

Answer: _Mashantucket_ Connecticut

MGM Grand

Answer: _Las Vegas_ Nevada or _Detroit_ Michigan

Bally's

Answer: _Las Vegas_ Nevada (if not answered before) or _Atlantic City_ New Jersey

Category	TU	BO	First 20	TU	BO	Last 9
History	4	4	4	1	1	1
Science	4	4	4	1	1	1
Literature	3	3	3	1	1	1
Trash	2	2	2	1	1	1
RPM	2	2	2	1	1	1
Art	1	1	1	0	1	1
Music	1	1	1	0	1	
Social Science	1	1		1	1	
Geography	1	1		1	0	
Class Trash	0	1		0	0	
CE	1	1	1	0	0	