

Exhuming new light

Svante Paabo's Medicine Nobel win should **inspire** biologists to **shun** academic **straitjacket**

The Nobel Prize for Medicine this year will be awarded to Svante Pääbo, a Swedish **geneticist** and a director of the Max Planck Institute for Evolutionary **Anthropology** in Leipzig, Germany. Science being of an increasingly **collaborative** and competitive nature, recent trends in Nobel Prizes suggest that there are usually multiple winners for every prize. It is a **tribute** to the originality and **revolutionary implications** of Pääbo's research that in a world **perennially reshaped** by **advances** in biology, he has been chosen as the **lone** winner of the Medicine or Physiology Prize this year — something not **witnessed** since 2016. **Pääbo**, 67, **has** quietly **instigated** a **Copernican** revolution. Much like **the latter** placed the sun at the centre and **demoted** the earth to another **circumscribed, perambulatory** planet, Pääbo brought **Neanderthals** — believed to be among the many human-like species and losers of the evolutionary race — to the centre on the question of human evolution. **Thanks to** his work, it is now known that Europeans and Asians carry anywhere between 1%-4% of Neanderthal DNA. Thus, a large fraction of humanity will be influenced in terms of **propensity** to disease and **adaptability** to conditions by a species that evolved, like humans, in Africa, but 1,00,000 years earlier. Pääbo **demonstrated** this by **pioneering** and perfecting techniques to **extract** DNA from fossil **remains**, a **herculean task** as they contain too little and are easily **contaminated**. By **building on** these methods, Pääbo and his colleagues eventually published the first Neanderthal genome sequence in 2010. To **put that in perspective**, the first complete sequence of the human genome was only completed in 2003. **Comparative analyses** with the human genome **demonstrated** that the most recent common ancestor of Neanderthals and **Homo sapiens** lived around 8,00,000 years ago; that both species frequently lived in **proximity** and **interbred** to an extent that the Neanderthal genetic **stamp lives on**.

In 2008, a 40,000-year-old **fragment** from a finger bone **yielded** DNA that, in Pääbo's lab, **turned out** to be from an entirely new species of hominin called Denisova. This was the first time that a new species had been discovered based on DNA analysis. Further analysis showed that it too had interbred with humans and 6% of human genomes in parts of South East Asia are of Denisovan **ancestry**. These discoveries **throw up** philosophical questions on what it means to be a 'species'. Pääbo's win must inspire future biologists in India to **pursue** deep questions and use science to **shed new light** rather than **compartmentalise** themselves in an academic straitjacket. [Practice Exercise]

- Red/blue coloring of words in the sentence indicates subject verb relationship; where 'red' denotes 'subject' and 'blue' denotes 'verb'.

Vocabulary

1. **Exhume** (verb) – To bring to light, especially after a period of obscurity. प्रकाश में लाना
2. **Inspire** (verb) – stimulate, motivate, excite, encourage, rouse प्रेरित करना
3. **Shun** (verb) – avoid, spurn, reject, eschew, snub दूर करना, छोड़ना,
4. **Straitjacket** (noun) – anything immaterial that severely hinders or confines हथकड़ी, जंजीर
5. **Geneticist** (noun) – A biologist who specializes in genetics आनुवंशिकीविद्
6. **Anthropology** (noun) – The science of man; -- sometimes used in a limited sense to mean the study of man as an object of natural history or as an animal. मानव-विज्ञान
7. **Collaborative** (adjective) – cooperative, joint, collective, common, concerted सहयोगपूर्ण
8. **Tribute** (noun) – accolade, praise, homage, commendation, eulogy श्रद्धांजलि, सम्मान
9. **Revolutionary** (adjective) – radical, insurgent, rebel, subversive, revolutionist क्रांतिकारी
10. **Implication** (noun) – Consequence, repercussion, effect प्रभाव
11. **Perennially** (adverb) – constantly, perpetually, eternally, everlastingly, permanently बारहमासी रूप से, निरंतर
12. **Reshape** (verb) – Shape anew or differently नए सिरे से आकार देना
13. **Advance** (noun) – Development, improvement, innovation, enhancement विकास, प्रगति
14. **Lone** (adjective) – single, lonely, solitary, sole, only अकेला
15. **Witness** (verb) – See, observe, view, perceive देखना
16. **Instigate** (verb) – provoke, incite, inspire, stir up, prompt भड़काना
17. **Copernican** (adjective) – according to Copernicus
18. **The latter** (noun) – here it refers to Nicolaus Copernicus.
19. **Demote** (verb) – to lower in rank or position; relegate दर्जा घटाना, दर्जा नीचा करना
20. **Circumscribed** (adjective) – Restricted, bounded, limited, constrained, confined घिरा हुआ
21. **Perambulatory** (adjective) – roaming, vagabond, peripatetic, wayfaring, roving भ्रमणकारी
22. **Neanderthals** (noun) – an extinct species of human that was widely distributed in ice-age Europe between c. 120,000 and 35,000 years ago, with a receding forehead and prominent brow ridges. The Neanderthals were associated with the Mousterian flint industry of the Middle Palaeolithic

23. **Thanks to** (phrase) – owing to, as a result of, because of के कारण से
24. **Propensity** (noun) – tendency, inclination, proclivity, predisposition, leaning झुकाव
25. **Adaptability** (noun) – an ability or willingness to change in order to suit different conditions अनुकूलनीयता
26. **Demonstrate** (verb) – show, prove, display, manifest, evidence साबित करना
27. **Pioneering** (adjective) – innovative, groundbreaking, avant-garde, novel, trailblazing अग्रणी
28. **Extract** (verb) – obtain, unearth, extricate, separate, root out निकालना
29. **Remains** (noun) – Leftover, remnant, ruins, vestige अवशेष
30. **Herculean task** (phrase) – daunting task, challenging task, demanding task, arduous task, onerous task कठिन कार्य
31. **Contaminated** (adjective) – polluted, tainted, foul, dirty, infected संदूषित
32. **Build on** (phrasal verb) – Develop; use something as a basis for further development
33. **Put something in perspective** (phrase) – To compare something with a similar thing to give a clearer, more accurate idea.
34. **Homo Sapiens** (noun) – the kind or species of human being that exists now मानवता
35. **Proximity** (noun) – vicinity, closeness, nearness, propinquity, juxtaposition निकटता
36. **Interbreed** (verb) – (with reference to an animal) breed or cause to breed with another of a different race or species.
37. **Stamp** (noun) – a particular class or type of person or thing.
38. **Live on** (phrasal verb) – live, survive, subsist, hold out, endure जीवित रहना
39. **Fragment** (noun) – A piece broken off or cut off of something else टुकड़ा
40. **Yield** (verb) – Produce, bear, generate, bring in हासिल करना
41. **Turn out** (to be) (phrasal verb) – prove to be the case; emerge, transpire, come to light प्रकट हो जाना, निकलना
42. **Ancestry** (noun) – Lineage, descent, origin वंश
43. **Throw up** (phrasal verb) – to raise quickly उठाना
44. **Pursue** (verb) – Carry out or participate in an activity; be involved in पीछा करना
45. **Shed/throw a light on** (phrase) – to provide information about something or to make something easier to understand: पर रौशनी डालना
46. **Compartmentalise** (verb) – divide into discrete sections or categories.

Practice Exercise

Direction (Q1 – Q3): Select the best express synonym of the given words [Editorial page]

1. Svante Paabo's Medicine Nobel win should inspire biologists to shun academic straitjacket
 - A. Partisan
 - B. Alacrity
 - C. Avoid
 - D. Vestige
2. a large fraction of humanity will be influenced in terms of propensity to disease
 - A. Inclination
 - B. Oblique
 - C. Conjure
 - D. Reprove
3. both species frequently lived in proximity and interbred to an extent that the Neanderthal genetic stamp lives on
 - A. Abstruse
 - B. Flout
 - C. Capitulate
 - D. Nearness
4. **Idioms & Phrase**

Many manufacturers have to walk a tightrope between pricing their goods too high and not selling them, and pricing them low and losing money.

 - A. To garner attention and be the topic of conversation.
 - B. A situation in which an advantage that is won by one of two sides is lost by the other
 - C. Be in situation where mistake is dangerous
 - D. To change the balance of a situation, such that one side or element is favored or gains advantage.
5. **Direction: Six statements are given below, which are jumbled in any random order. These statements will form a coherent and meaningful paragraph, when arranged in the correct sequence. Arrange the sentences in the right order and answer the questions that follow.**

By choosing to place a "technical hold" on the joint India-U.S. proposal to designate Jaish-e-Mohammad deputy chief Rauf Asghar a global terrorist on the United Nations Security Council 1267 Committee listing, China has swung another blow to its ties with India, which are already at a fragile point.

P. The two sides sparred in the maritime sphere this week, after India made its concerns over the proposed docking of a Chinese satellite tracking ship at Sri Lanka's Hambantota port clear to the Sri Lankan government.

Q. And while bilateral trade has recovered from the COVID-19 downturn,

R. Despite 16 rounds of military commander talks at the Line of Actual Control, India and China have failed to resolve the standoff that began with the PLA amassing troops, and transgressions along the LAC in April 2020.

S. just two months after Beijing similarly stopped the designation of Lashkar-e-Taiba deputy chief Abdul Rahman Makki.

T. At a time when bilateral trust is already in such deficit comes China's decision to stop an important terror listing,

U. Chinese technology majors in India are being raided by the Enforcement Directorate and Income Tax authorities under suspicion of a range of financial crimes.

Which among the following will be the **Fourth** sentence of the paragraph after the rearrangement?

- A. P B.T C.U D.Q E.R

Direction (Q6 – Q7): Read the given sentences to find out whether there is any grammatical error in them

6. Until the world lasts, (A)/ the earth will go (B)/ round the sun. (C)/ No error (D)

7. I go to the temple (A)/ as often as (B)/ I find time. (C)/ No error (D)

Directions (8-9): In the following questions two columns are given containing three Sentences/phrases each. In first column, sentences/phrases are A, B and C and in the second column the sentences/phrases are D, E and F. A sentence/phrase from the first column may or may not connect with another sentence/phrase from the second column to make a grammatically and contextually correct sentence. Each question has five options, four of which display the sequence(s) in which the sentences/phrases can be joined to form a grammatically and contextually correct sentence. If none of the options given forms a correct sentence after combination, mark option (E), i.e. "None of these" as your answer.

8.

	Column (1)		Column (2)
A.	Let us congratulate him	D	by the road because it is less expensive.
B.	Many people prefer to travel	E	that she had been selected for the job.
C.	She was beside herself with joy when she came to know	F	on his success in the examination

- A. B-D B.B-E, C-D C.A-E, C-D D.C-E, A, F E. None of these

9.

	Column (1)		Column (2)
A.	Mother tongue is as natural for the development of man's	D	mind as mother's milk is for the development of the infant's body
B.	The prime minister as well as his	E	secretary were expected to arrive in Chennai on Saturday morning.
C.	We discussed the problems so	F	thoroughly that I found it easy to work it out

- A.A-E, B,D B. A-D, C-F C. A-D, B-E D.B-D E. None of these

10. Find out the misspelt word

- A. Millennium
- B. Humorous
- C. Allegiance
- D. Bouyant

Direction: Read the passage given below and answer the following questions.

(The Hindu Editorial: Three to tangle – Sep 13, 2022)

India is understandably **(A)**/ upset with the U.S.'s decision to refurbishing **(B)**/ the F-16 fighter **(C)**/ fleet of Pakistan. **(D)**

The fleet has been the backbone of the Pakistan Air Force since the early 1980s, upgraded, and **replenished** periodically. As the partnership between the two countries grew over the years, including and particularly in the defence sector, India continuously raised its concerns on this account with U.S. interlocutors. Successive U.S. administrations have maintained that the defence partnership with Pakistan, which is a major non-NATO ally, is a critical component of its global war on terror — a point contested by India. In 2016, the U.S. Congress _____ the Obama administration's move to give more F-16 fighters to Pakistan. New Delhi's apprehensions came true in February 2019, a day after the Balakot air strike by the Indian Air Force, when Pakistan _____ its F-16s to target Indian military bases close to the Line of Control. The Indian Army recovered debris of the Advanced Medium Range Air-to-Air Missile fired by the F-16s. On September 7, the U.S. Defense Security Cooperation Agency notified a possible Foreign Military Sales worth \$450 million for engine, electronic warfare and other hardware and software upgrades and spares for Pakistan's F-16s. Though it said that the proposed sale does not include any new capabilities, weapons, or munitions, the move clearly marks a thaw in the U.S.'s attitude towards Pakistan.

The External Affairs Ministry has chosen to maintain its silence on the issue, **unlike(A)** its public expression of **strides(B)** the U.S. Ambassador in 2016. The U.S. move **strains(C)** its relationship with India which has been making great **summoning (D)**, though it is not without obstacles. New Delhi and Washington have been skilfully managing their differences over Afghanistan, the crisis in Ukraine, and the _____ **11** _____ threat of U.S. sanctions under its Countering America's Adversaries Through Sanctions Act. Washington's new _____ **12** _____ with Islamabad also comes amid a flurry of India-U.S. diplomatic and military engagements. India and the U.S. have committed to deepening defence and security cooperation, but the _____ **13** _____ of Pakistan dampens that spirit. The Trump administration had tried to hold Pakistan accountable for duplicity in its approach towards terrorist groups operating from its territory, which amounts to running with the hare and hunting with the hounds. To stay in Afghanistan, the U.S. needed Pakistan; now to stay away from Afghanistan it needs Pakistan even more. While the U.S. may have its reasons to keep Pakistan humoured and _____ **14** _____, India's concerns are immediate and real. Terrorism against India has been Pakistan's state policy for decades. Far from seeking accountability, the U.S. is rewarding Pakistan, and more on the same lines may in the offing. India and the U.S. need to work to ensure that the spectacular gains made in bilateral ties are preserved and nourished.

Fill in the blank with the most appropriate word given in the option (From Q11 – Q14)

11. New Delhi and Washington have been skilfully managing their differences over Afghanistan, the crisis in Ukraine, and the _____11_____ threat of U.S. sanctions
- A. Cognitive
 - B. Lingering
 - C. Reciprocal
 - D. Anarchy
12. Washington's new _____12_____ with Islamabad also comes amid a flurry of India-U.S. diplomatic and military engagements.
- A. Encroaching
 - B. Rogue
 - C. Warmth
 - D. Mediating
13. India and the U.S. have committed to deepening defence and security cooperation, but the _____13_____ of Pakistan dampens that spirit.
- A. Fraternal
 - B. Inept
 - C. Profuse
 - D. Indulgence
14. While the U.S. may have its reasons to keep Pakistan humoured and _____14_____, India's concerns are immediate and real.
- A. Verbose
 - B. Prudent
 - C. Steadfast
 - D. Incentivized
15. **The following sentence may or may not contain an error in one of its parts. Identify the part containing the error. If the sentence is correct, select 'No error' as your answers.**
India is understandably (A)/ upset with the U.S.'s decision to refurbishing (B)/ the F-16 fighter (C)/ fleet of Pakistan. (D)
- A. (A)
 - B. (B)
 - C. (C)
 - D. (D)
 - E. No Error
16. **Directions: In the question below, a sentence is given with two blanks that indicate that some parts are missing. Identify the correct pair of words that fit in the sentence to make it grammatically and contextually correct.**
In 2016, the U.S. Congress _____ the Obama administration's move to give more F-16 fighters to Pakistan. New Delhi's apprehensions came true in February 2019, a day after the Balakot air strike by the Indian Air Force, when Pakistan _____ its F-16s to target Indian military bases close to the Line of Control.

- A. Delayed, Organized
B. Hindering, Position
C. Hesitated, arranged
D. Stalled, deployed
E. None of the above
17. **Given below is a word, followed by three sentence that consist of that word. Identify the sentence (S) that best express (es) the meaning of the word. Choose option 5 'None of the above' if the word is not suitable in any of the sentence**
REPLENISHED
(i) To keep seed availability roughly constant throughout our experiments, baits were **replenished** when necessary.
(ii) Does your glass need **replenishing**?
(iii) Food stocks were **replenished** with imports from abroad.
A. Only (i)
B. Only (ii)
C. Only (iii)
D. (i), (ii), (iii)
E. (ii), (iii)
18. **In the following question, a sentence is given with four words marked as (A), (B), (C), and (D). These words may or may not be placed in the correct order. Four options with different arrangements of these have been provided. Mark the option with the correct arrangement as the answer. If no rearrangement is required, mark option (5) as your answer.**
The External Affairs Ministry has chosen to maintain its silence on the issue, **unlike(A)** its public expression of **strides(B)** the U.S. Ambassador in 2016. The U.S. move **strains(C)** its relationship with India which has been making great **summoning (D)**, though it is not without obstacles.
A. C – A
B. A – D
C. B – D
D. D – C
E. No arrangement
19. **Select the connector from the given options which can be used to form a single sentence from the two sentences given below, implying the same as expressed in the statement sentence.**
(i) I couldn't get my head around the Passive Voice.
(ii) I don't think it's important to use it all the time.
A. Then
B. Although
C. But
D. Anyway
E. None of the above
20. **Fill the appropriate preposition in the given blanks**

He was greatly incensed _____ his conduct.

- A. Of
- B. In
- C. At
- D. To

Answers

1. C 2. A 3. D 4. C 5. C 6. A 7. A 8. D 9. B 10. D 11. B 12. C
13. D 14. D 15. B 16. D 17. D 18. C 19. D 20. C

[\[Practice Exercise\]](#)

Explanations

4. **Walk a tightrope** (phrase) – be in situation where mistake is dangerous.

5. **RPQUTS**

By choosing to place a “technical hold” on the joint India-U.S. proposal to designate Jaish-e-Mohammad deputy chief Rauf Asghar a global terrorist on the United Nations Security Council 1267 Committee listing, China has swung another blow to its ties with India, which are already at a fragile point. Despite 16 rounds of military commander talks at the Line of Actual Control, India and China have failed to resolve the standoff that began with the PLA amassing troops, and transgressions along the LAC in April 2020. The two sides sparred in the maritime sphere this week, after India made its concerns over the proposed docking of a Chinese satellite tracking ship at Sri Lanka’s Hambantota port clear to the Sri Lankan government. And while bilateral trade has recovered from the COVID-19 downturn, Chinese technology majors in India are being raided by the Enforcement Directorate and Income Tax authorities under suspicion of a range of financial crimes. At a time when bilateral trust is already in such deficit comes China’s decision to stop an important terror listing, just two months after Beijing similarly stopped the designation of Lashkar-e-Taiba deputy chief Abdul Rahman Makki.

6. ‘until’ के बदले ‘As long as’ का प्रयोग होगा क्योंकि ‘until’ का अर्थ है ‘जब तक नहीं’ जबकि ‘As long as’ का अर्थ है ‘जबतक’, जैसे-

- i. You can sit here until Mohan comes.
- ii. As long as she is with me, I need not fear.

➤ 'As long as' will be used instead of 'until' because 'until' means 'up to' while 'As long as' means 'provided that', as-

- i. You can sit here until Mohan comes.
- ii. As long as she is with me, I need not fear.

7. ‘the’ का प्रयोग नहीं क्योंकि ‘go to church, go to temple’ का प्रयोग होता है यदि जाने का मकसद ‘प्रार्थना’, ‘पूजा-पाठ’ हो; जैसे-

- i. She goes to church daily.

➤ 'the' is not used because 'go to church, go to temple' is used if the purpose of going is 'prayer', 'worship'; like-

- i. She goes to church daily.

8. **Correct Option: D**

Let us congratulate him on his success in the examination.

Fragment A of column 1 is matched with fragment F of column 2 to make the sentence contextually and grammatically correct.

Many people prefer to travel by the road because it is less expensive

Fragment B of column 1 is matched with fragment D of column 2 to make the sentence contextually and but grammatically incorrect

Correct is: **Many people prefer to travel by road because it is less expensive**

- 'the' को हटाना पड़ेगा क्योंकि यात्रा का मार्ग बताने के लिए 'by road, by air, by sea, by rail' का प्रयोग होता है।

'the' has to be removed because 'by road, by air, by sea, by rail' is used to indicate the route of travel.

She was beside herself with joy when she came to know that she had been selected for the job.

Fragment C of column 1 is matched with fragment E of column 2 to make the sentence contextually and grammatically correct

9. **Correct Option: B**

Mother tongue is as natural for the development of man's mind as mother's milk is for the development of the infant's body.

Fragment A of column 1 is matched with fragment D of column 2 to make the sentence contextually and grammatically correct

The prime minister as well as his secretary was expected to arrive in Chennai on Saturday morning.

Fragment B of column 1 is matched with fragment E of column 2 to make the sentence contextually and grammatically incorrect

- 'were' के बदले 'was' का प्रयोग होगा क्योंकि जब दो subjects 'as well as' से जुड़ते हैं तो verb पहला subject के अनुसार होता है और प्रश्न में पहला subject 'The prime minister' singular है जिसके लिए singular verb का प्रयोग होगा।

'was' will be used instead of 'were' because when two subjects are joined 'as well as' then the verb is according to the first subject and the first subject in the question is 'The prime minister' singular for which Singular verb will be used.

We discussed the problems so thoroughly that I found it easy to work it out.

Fragment C of column 1 is matched with fragment F of column 2 to make the sentence contextually and grammatically correct

10. **Buoyant** (adjective) – cheerful, happy, cheery, sunny, lively प्रसन्नचित्त

11. **Lingering** (adjective) – lasting, remaining, persistent, enduring, haunting मंडराता

12. **Warmth** (noun) – kindness, tenderness, friendliness सौहार्द

13. **Indulgence** (noun) – leniency, tolerance, forbearance, extravagance लाड़, उदारता

14. **Incentivise** (verb) – motivate or encourage (someone) to do something प्रोत्साहित करना

15. 'Refurbishing' के बदले 'Refurbish' का प्रयोग होगा क्योंकि 'To + V¹' is used in Infinitive.

16. **Stall (verb)** – Stop, freeze, pause, halt, impede, check, shelve रोकना, टालना

Deploy (verb) – Place troops or weapons in battle formation तैनात करना

17. **Replenish** (verb) – refill, fill, restock, restore, top up भरना

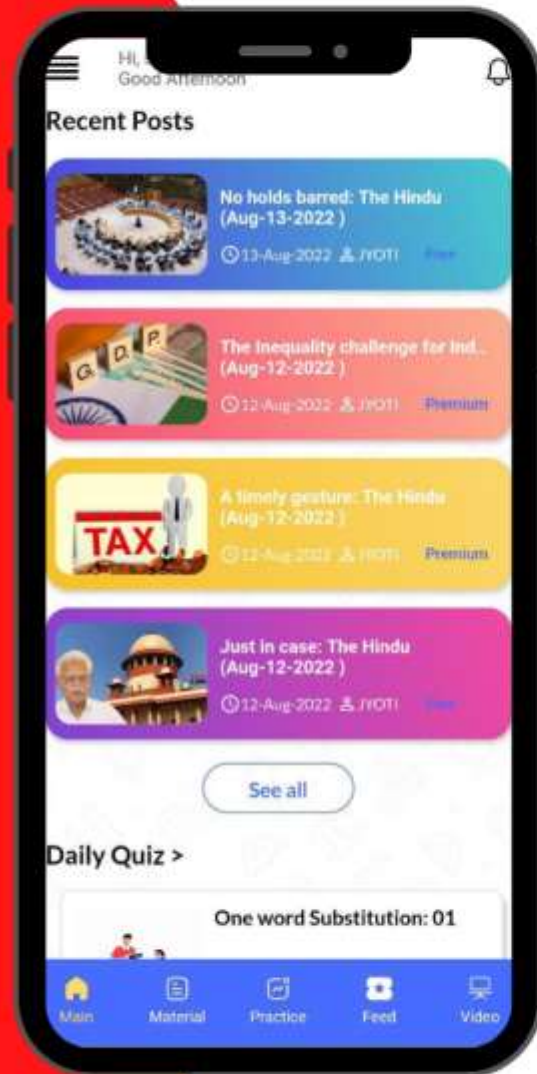
According to the given options all options are contextually correct.

18. The External Affairs Ministry has chosen to maintain its silence on the issue, unlike its public expression of summoning the U.S. Ambassador in 2016. The U.S. move strains its relationship with India which has been making great strides, though it is not without obstacles.

19. I couldn't get my head around the Passive Voice. **Anyway**, I don't think it's important to use it all the time.

Explanation of other important words

Sr.NO	Words		Meanings	
Q1	Partisan	noun	One who support a particular person, cause, idea	पक्षपातपूर्ण
	Alacrity	noun	Cheerful eagerness or readiness to respond	तत्परता, उत्साह, फुरती
	Vestige	noun	Remaining bit of something; a last race	शेष
Q2	Oblique	adjective	Indirect; at an angle	अप्रत्यक्ष
	Conjure	verb	To summon or bring into being as if by magic	जादू करना, तमाशा दिखाना
	Reprove	verb	To criticize mildly	निंदा करना
Q3	Abstruse	adjective	Hard to understand	अव्यक्त
	Flout	verb	To disregard something out of disrespect	अनादर करना, अवज्ञा करना
	Capitulate	verb	To surrender; to give up or give in	शर्त पर हथियार डाल देना
Q11	Cognitive	adjective	Dealing with how we know the world around us through our sense; mental	संज्ञानात्मक
	Reciprocal	adjective	Mutual; shared; interchangeable	पारस्परिक
	Anarchy	noun	Absence of government or control; lawlessness; disorder	अराजकता
Q12	Encroach	verb	To make gradual or stealthy in roads into; to trespass	अतिक्रमण करना
	Rogue	noun	Criminally dishonest person; a scoundrel	दुष्ट
	Mediate	verb	To help settle difference	मध्यस्थ
Q13	Fraternal	adjective	Like brothers	भाईचारे का, आपसी
	Inept	adjective	Clumsy; incompetent; gauche.	अयोग्य
	Profuse	adjective	Flowing; extravagant	विपुल
Q14	Verbose	adjective	Using too many words; not succinct; circumlocutory	वाचाल
	Prudent	adjective	Careful; having foresight	विवेकी
	Steadfast	adjective	Loyal; faithful	दृढ़



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