LL.B. ADMISSION TEST – 2023

Question Booklet Sl. No.

Date of Exam. :	Center's Name : _____
Duration : **90 Minutes**	Roll No. : _____
Max. Marks : **150**	OMR Sheet No. : _____

INSTRUCTIONS TO CANDIDATES

1. **No clarification on the Question Paper can be sought. Answer the questions as they are.**
2. There will be **150** Multiple Choice Questions (MCQ) of one mark each to be answered in the OMR Response Sheet only. **Total marks are 150. Answer ALL the Questions**.
3. **There will be Negative Marking for Multiple Choice Questions (MCQ). For every wrong answer 0.25 marks will be deducted.**
4. Candidates have to indicate the most appropriate answer by darkening one of the four responses provided, with **only BLACK/BLUE BALL POINT PEN** in the OMR Response Sheet.

   Example : For the question, "Where is the Taj Mahal located ?"

   a) Kolkata b) Agra c) Bhopal d) Delhi

   Right Method **Wrong Methods**

   

5. Answering the question by any method other than the method mentioned above shall be considered wrong answer.
6. More than one response to a question shall be counted as wrong answer.
7. The candidate shall not write anything on the OMR Response Sheet other than the details required and in the spaces provided for.
8. After the examination is over, the candidate can carry the Question Booklet along with candidate's copy of the OMR Response Sheet. Candidate will hand over the original OMR Response Sheet to the invigilator.
9. The use of any unfair means by any candidate will result in the cancellation of his/her candidature.
10. **Impersonation is an offence and the candidate, apart from disqualification, may have to face criminal prosecution.**
11. **Electronic gadgets like mobile phones, digital watch, pagers and calculators etc. are strictly not permitted inside the Test Centre/Hall.**
12. **The candidates shall not leave the hall before the end of the Test.**

BREAK-UP OF MARKS

Section	Subject	Q. No.	Marks
Part – 1, Section – A	English	1 – 5, 13 – 17, 25 – 29, 37 – 41, 49 – 53, 61 – 65, 73 – 77, 85 – 89, 97 – 101, 109 – 113	50
Part – 1, Section – B	Logical Reasoning	6 – 12, 18 – 24, 30 – 36, 42 – 48, 54 – 60, 66 – 72, 78 – 84, 90 – 96, 102 – 108, 114 – 120	70
Part – 2	General Knowledge and Current Affairs	121 – 150	30
Total Marks			**150**

Directions : I to X : Each set of questions in this section are based on the passage. The questions are to be answered on the basis of what is stated or implied in the passage. Choose the most appropriate response that accurately and completely answer the question.

PART – 1

I. Aristotle, an ancient philosopher, was one of the first to discuss syllogisms. In *Prior Analytics*, published around 350 BCE, Aristotle outlined the basic form of syllogism which represented the earliest branch of formal logic. For Aristotle, logic revolved around deduction : "*speech in which certain things having been supposed something different from those supposed results of necessity because of their being so."*

If that sounds confusing – that's ancient philosophy for you! Let's break it down. "The things that have been supposed" are what we now call "premises". "What results necessarily" from those premises being true is a conclusion.

To Aristotle, if an argument was valid, it would be impossible for premises X and Y to be true and for conclusion Z to be false. Aristotle named this method of proving validity "reductio ad impossibile" : a syllogism is valid when the denial of the conclusion but acceptance of the premises would lead to a contradiction.

Aristotle divided syllogistic propositions into four different categories : universal affirmative, particular affirmative, universal negative and particular negative.

A universal affirmative syllogistic sentence : All humans need food.

A particular affirmative syllogistic sentence : Some birds can fly.

A universal negative syllogistic sentence : No dogs are cats.

A particular negative syllogistic sentence : Not all cars have four doors.

During the rise of modern formal logic, German philosopher Gottlob Frege refined Aristotle's syllogistic theory through the addition of non-categorical syllogisms. These are syllogisms that rely on premises and can be hypothetical, or which include disjunctions like 'or'. The hypothetical form of syllogisms can be traced back to Stoic philosophy, but modern philosophers tend to attribute the theory to Frege. In the 19th century, British philosopher and economist John Neville Keynes also helped make non-categorical syllogisms popular.

Here's an example of a hypothetical syllogism :

1. If it is sunny tomorrow, I can go running.
2. It is sunny.
3. Therefore, I can go running.

Here's an example of a disjunctive syllogism :

1. Patrick studies English or Linguistics.
2. Patrick is not studying Linguistics.
3. Therefore, he is studying English.

In the *Begriffsschrift* (German for "Concept-Script"), he refined Aristotle's system by developing a logical system that explained how quantifiers (words like "all" and "some") work. His system also became the basis for modern computer science.

Section – A : English

1. Select the appropriate option to fill the blank.

   In the line, 'Aristotle outlined the basic form of syllogism…' in paragraph 1, the writer means that Aristotle _____ the topic.

   a) shared an introductory insight on
   b) paraphrased features of
   c) wrote a detailed discussion on
   d) presented the main aspects of

2. The writer's use of an exclamation mark in the line '... that's ancient philosophy for you!', from paragraph 2. What is the most likely tone this indicates ?

   a) derogatory
   b) humorous
   c) sarcastic
   d) provocative

3. Select the option that is true for both (1) and (2) below, according to paragraph 3.

   (1) A conclusion is the main feature of a premise.
   (2) Premises need to be proven true for a conclusion to occur.

   a) (1) is true but (2) is false.
   b) Both (1) and (2) are true.
   c) (2) is true but (1) cannot be inferred from the text.
   d) (1) is true but (2) cannot be inferred from the text.

4. Select the option that substitutes the underlined word correctly in the given line.

   'These are syllogisms that rely on premises being <u>hypothetical</u>…'

   a) conjectural
   b) climatic
   c) conciliatory
   d) corroborative

5. Select the option that uses a 'quantifier', as mentioned in the last paragraph.

   a) We saw a lot of birds at the sanctuary.
   b) The sanctuary is located beyond the city walls.
   c) The birds migrate to the sanctuary in March.
   d) We planned the trips to the bird sanctuary.

Section – B : Logical Reasoning

6. Let the following premises be true : "If it is sunny on any given day, I can go running.", and "It is not sunny today." Which of the following must be true ?

   a) I cannot go running today.
   b) I can go running today.
   c) I can go walking today.
   d) None of the above

7. If a majority of spoons are forks, then which of the following *could be true* ?

   a) A majority of forks are spoons
   b) A minority of forks are spoons
   c) All forks are spoons
   d) All the above

8. Assume that (A) a majority of blankets are sheets, (B) a majority of blankets are tablecloths, and (C) no non-blanket sheet (i.e., a sheet that is not a blanket) is a non-blanket tablecloth (i.e., a tablecloth that is not a blanket). Which of the following is true ?
   a) No sheets are tablecloths
   b) Some sheets are tablecloths
   c) All sheets are tablecloths
   d) Cannot be determined

9. A minority of wallets are purses. A majority of wallets are perfumes. Which of the following could be true ?
   a) No purses are perfumes
   b) All purses are perfumes
   c) Both a) and b)
   d) Neither a) nor b)

10. A majority of Formula 1 cars are race-cars. All race-cars drive on four wheels. All four-wheeled cars are twenty times as fast as cars that drive on any other number of wheels. Speed is the only determining factor for winning a race that involves cars. Which of the following is/are correct ?
   a) In a Formula 1 race, a non-four-wheeled car (i.e., a car that does not drive on four wheels) will never be able to win.
   b) In a Formula 1 race, the winner of a race among 20 cars can be predicted using only the number of wheels that a car drives on.
   c) In an Indy500 race, where all participating cars are race-cars, the winner of a race among 50 cars can be predicted.
   d) Both a) and b).

11. A minority of folders are documents. Which of the following is not true ?
   a) If there are folders, there are documents.
   b) If there are documents, there are at least 2 folders.
   c) If there are no documents, there are no folders.
   d) All of the above are true.

12. All moons are asteroids. All planets are celestial bodies. Some planets are moons. Therefore,
   a) All asteroids are celestial bodies.
   b) All asteroids are planets.
   c) Some asteroids are planets.
   d) None of the above

II. During her grandfather's reign, Elizabeth was third in the line of succession to the British throne, behind her uncle Edward and her father. Her younger and only sister Margaret was next in the line of succession. When her grandfather died in 1936 and her uncle succeeded as Edward VIII, she became second in line to the throne, after her father. Later that year, Edward abdicated without any issue (i.e., child), after his proposed marriage to divorced socialite Wallis Simpson provoked a constitutional crisis. Consequently, Elizabeth's father became king, taking the regnal name George VI. Since Elizabeth had no brothers, she became heir presumptive. If her parents had subsequently had a son, he would have been heir apparent and above her in the line of succession, which was determined by the male-preference primogeniture (as against female-preference primogeniture or primogeniture *simpliciter*) in effect at the time.

George VI's health declined during 1951, and Elizabeth frequently stood in for him at public events. When she toured Canada and visited President Harry S. Truman in Washington, D.C., in October 1951, her private secretary, Martin Charteris, carried a draft accession declaration in case of the King's death while she was on tour. In early 1952, Elizabeth and Philip set out for a tour of Australia and New Zealand by way of the British colony of Kenya. On 6 February 1952, they had just returned to their Kenyan home, Sagana Lodge, after a night spent at Treetops Hotel, when word arrived of the death of George VI and Elizabeth's consequent accession to the throne with immediate effect. Philip broke the news to the new queen. She chose to retain Elizabeth as her regnal name; thus she was called Elizabeth II, which offended many Scots, as she was the first Elizabeth to rule in Scotland. She was proclaimed queen throughout her realms and the royal party hastily returned to the United Kingdom. Elizabeth and Philip moved into Buckingham Palace.

Section – A : English

13. Elizabeth's father had to ascend the throne because Edward had to step down. Select the correct reason he had to step down.
    a) Edward was a king without an heir.
    b) Edward was involved in a controversy.
    c) Edward objected to the line of succession.
    d) Edward wished to marry the same year as his father's death.

14. The word 'provoked' in the line 'provoked a constitutional crisis', refers to _____.
    a) deliberately rousing anger
    b) giving rise to a reaction
    c) pressuring for a response
    d) denying responsibility

15. What can be inferred as common between the understanding of *heir apparent* and *heir presumptive* ?
    a) brothers
    b) parental support
    c) age
    d) birth of another

16. The phrasal verb 'stood in' is used in the line, '...stood in for him at public events.' Select the option that DOES NOT display a phrasal verb.
    a) get by
    b) break down
    c) double minded
    d) fall apart

17. Select the option that negates the given opinion, based on the textual information.

    The Scots objected to Elizabeth's accession.
    a) No, Elizabeth became the undisputed monarch as the heir of George VI.
    b) No, the Scottish people embraced Elizabeth because of her Scottish lineage.
    c) No, Elizabeth was hastily crowned Queen at Buckingham Palace.
    d) No, Philip only shared the news of the death of George VI with Elizabeth.

Section – B : Logical Reasoning

18. Which of the following is true for Queen Elizabeth in the period described in the first sentence of the passage, "During her grandfather's reign, Elizabeth was third in the line of succession to the British throne, behind her uncle Edward and her father." ?
    a) Her uncle Edward had a child.
    b) She was not the oldest child of her father.
    c) Her uncle Edward was younger than her father.
    d) Her father was younger than her uncle Edward.

19. If, during the reign of George VI, George VI and his queen-consort had given birth to a boy, then : [for the purpose of this question, assume that heir presumptive and heir apparent are conceptually the same]
    a) The boy would have been third in line of succession – behind Elizabeth and Margaret (Elizabeth's younger sister)
    b) The boy would have been the heir presumptive.
    c) Elizabeth would have been the heir presumptive since she was the oldest among the George VI's children and the succession was determined by primogeniture, i.e., the eldest child is the heir presumptive.
    d) Both a) and c)

20. X was the reigning monarch of a country, which followed the rule of primogeniture for determining succession. The law of succession also holds that children born out of wedlock cannot be in the line of succession. Looking at a picture of the heir presumptive, he, i.e. X, said, "He is the son of my mother's daughter." Which of the following is correct ? [for the purpose of this question, assume that heir presumptive and heir apparent are conceptually the same]
    a) X is married to his sister.
    b) X does not have any children.
    c) X does not have any siblings.
    d) Both b) and c)

21. Which of the following can be deduced from the passage ?

a) Elizabeth II ruled over Scotland. b) Elizabeth I did not rule over Scotland.

c) Both a) and b) d) Neither a) nor b)

22. X and Y were married. They had three children: P, Q and R (in increasing order of ages). P had three children with her husband Q : A, B and C (in increasing order of ages). R had one child with her husband W : J. A, B, C and J do not have any children of their own. Which of the following is the correct line of succession after the death of X (the current monarch) assuming that the law regulating succession follows the rule of primogeniture?

a) R, J, Q, A, B, C, P b) R, J, Q, C, B, A, P

c) P, A, B, C, Q, R, J d) Q, A, B, C, P, R, J

23. Viserys is the current monarch of a country that follows the law of primogeniture. The laws of the country also prevent children born out of wedlock from being in the line of succession. Viserys' family is as follows : his brother Daemon, his daughter Rhaenyra from his marriage with Aemma (who died while giving birth to a stillborn child, Baelon), his sons Aegon and Aemond, and his daughter Halaena (the three of them being born from his marriage with Alicent, who is currently the queen-consort). Rhaenyra, Aegon, Aemond and Halaena are unmarried and do not have any children. Alicent wants to make her eldest son, Aegon, the heir presumptive. Which of the following options would help her succeed in her plan ? [for the purpose of this question, assume that heir presumptive and heir apparent are conceptually the same]

a) Kill Rhaenyra b) Kill Viserys c) Both a) and b) d) Neither a) nor b)

24. In the facts of the question above, assume that Rhaenyra had the following children out of wedlock : Jacaerys, Lucerys and Joffrey (in decreasing order of ages). None of them have any children of their own. What would be the place of Daemon in the line of succession during Viserys' lifetime ?

a) Fourth b) Fifth c) Eighth d) Ninth

III. What is phishing ?

Phishing is one of the easiest forms of cyberattack for criminals to carry out, and one of the easiest to fall for. It's also one that can provide everything hackers need to ransack their targets' personal and work accounts.

Usually carried out over email – although the phishing scam has now spread beyond suspicious emails to phone calls (so-called 'vishing') social media, messaging services (aka 'smishing') and apps – a basic phishing attack attempts to trick the target into doing what the scammer wants. That might be handing over passwords to make it easier to hack a company, or altering bank details so that payments go to fraudsters instead of the correct account.

Phishing is also a popular method for cyber attackers to deliver malware, by encouraging victims to download a document or visit a link that will secretly install the malicious payload in attacks that could be distributing trojan malware, ransomware or all manner of damaging and disruptive attacks. The aim and the precise mechanics of the scams vary : for example, victims might be tricked into clicking a link through to a fake web page with the aim of persuading the user to enter personal information – it's estimated that an average of 1.4 million of these websites are created every month.

More complex phishing schemes can involve a long game, with hackers using fake social media profiles, emails and more to build up a rapport with the victim over months or even years in cases where specific individuals are targeted for data that they would only ever hand over to people they trust.

That data can range from personal or corporate email address and password, to financial data such as credit card details or online banking credentials or even personal data such as date of birth, address and a social security number.

How does a phishing attack work ?

A basic phishing attack attempts to trick a user into entering personal details or other confidential information, and email is the most common method of performing these attacks.

The sheer number of emails sent every single day means that it's an obvious attack vector for cyber criminals. It's estimated that 3.7 billion people send around 269 billion emails every single day.

Researchers at Symantec suggest that almost one in every 2,000 of these emails is a phishing email, meaning around 135 million phishing attacks are attempted every day.

Most people simply don't have the time to carefully analyse every message that lands in their inbox – and it's this that phishers look to exploit in a number of ways.

Scams vary in their targets – some are aiming at unwary consumers. Here, their email subject line will be designed to catch the victim's eye – common phishing campaign techniques include offers of prizes won in fake competitions such as lotteries or contests by retailers offering a 'winning voucher'.

In this example, in order to 'win' the prize, the victims are asked to enter their details such as name, date of birth, address and bank details in order to claim. Obviously, there's no prize and all they've done is put their personal details into the hands of hackers.

Section – A : English

25. Select the option that correctly completes the following.
Doctors : cardiologist :: _____
a) lotteries : victims
b) malware : victims
c) social media : scam
d) criminals : hackers

26. Select the appropriate option to complete the sentence.
This text is most likely to be published as a _____
a) news item
b) personal narrative
c) speech draft
d) magazine article

27. Select the appropriate option to complete the sentence.
The purpose of the prolonged phishing game is to _____.
a) develop believable profiles
b) research the victims
c) gain in-depth information
d) establish faith

28. What about the victims often works favourably for phishers using emails ?
a) They face language issues
b) They remain very busy
c) They lack tech savviness
d) They have delayed access

29. Replace the underlined word with its correct meaning from the given options.
'Phishers <u>scam</u> people.'
a) loot
b) dupe
c) harm
d) betray

Section – B : Logical Reasoning

30. Which of the following logical relations is/are correct ?
a) Scamming is a superset of which phishing, vishing and smishing are mutually-exclusive subsets.
b) Scamming and phishing are mutually exclusive sets; vishing and smishing are subsets of phishing.
c) Vishing and smishing are subsets of scamming.
d) None of the above.

For Questions 31 – 36 :

A company has designed a bot to filter scam emails. The method used by the filter is to convert emails to a code using a proprietary software, and then to check the code to see if it meets the following conditions. If the converted code meets each of the said conditions, then it is filtered out as scam.

i. The code should not contain special characters (i.e. non-alphanumeric characters)
ii. The code should not contain any character appearing twice consecutively
iii. The code should not contain any character appearing thrice consecutively
iv. The code should not contain any string that contains a numeric character followed by an alphabetical character

31. Which of the following emails (converted to code) is scam according to the filter ?
a) 55923423 b) ersfjtncjlx c) 243434p123 d) 3454xxx`

32. Which of the following emails (converted to code) is scam according to the filter ?
a) Thisemailisscam
b) Thisemailisnotscam.
c) Thisemaillikelyisscam
d) None of the above

33. Which of the following statements is correct about the conditions used in the filter ?
a) Condition (ii) is redundant in light of Condition (iii)
b) Condition (iii) is redundant in light of Condition (ii)
c) Condition (i) is redundant because no codes have special characters in them in any event
d) Both a) and b)

34. Can this bot be used to filter phishing emails ?
a) This bot will necessarily filter some (but not all) phishing emails.
b) This bot may filter only some (but not all) phishing emails.
c) This bot will not filter any phishing emails.
d) This bot will filter all phishing emails.

35. A scammer has figured out a way to manipulate the working of the bot. However, he has not yet figured out the manner in which the bot categorizes email as scam or not-scam. The loophole works by using a certain “macro” in an email. The “macro” transforms the code of the email into a new code using the following sequential steps: first, letters t – z are transformed into numbers 1 – 7, respectively; second, numbers 1 – 9 are transformed into letters a – i, respectively; and third, number 0 is transformed into the letter j. Which of the following can be codes generated by the “macro” ?
a) Abcgiijg2s
b) Abcgiijgzs
c) Abc0iijgs
d) Abcoiijgs

36. The company that created the bot reverse-engineered the scheme of the scammer. The company wants to use the following steps to transform the “macro”-generated code into the original code.
    i. Transform numbers 1 – 7 to letters t – z, respectively
    ii. Transform letters a – i to numbers 1 – 9, respectively
    iii. Transform letter j to number 0

    What is the order in which these steps should be undertaken to fulfil the company’s aim ?
    a) (i) followed by (ii) followed by (iii)
    b) (iii) followed by (ii) followed by (i)
    c) (ii) followed by (i) followed by (iii)
    d) These steps, in whichever order, cannot achieve the company’s aim

IV. **Great Pacific Garbage Patch**, a zone in the Pacific Ocean between Hawaii and California that has a high concentration of plastic waste. The extent of the patch has been compared to the U.S. State of Texas or Alaska or even to the country of Afghanistan.

Garbage that reaches the ocean from the west coast of the United States and from the east coast of Japan is carried by currents – including the California Current, the North Equatorial Current, the North Pacific Current, and the Kuroshio – into the North Pacific subtropical gyre, the clockwise rotation of which draws in and traps solid matter such as plastics. Some 80 percent of the plastics in the garbage patch come from the land. It takes years for debris to travel from the coasts to the gyre, and as it is carried along, photodegradation causes the plastics to break down into tiny, nearly invisible bits. While there are some larger objects that come from ships and offshore oil rigs, the garbage patch could more accurately be described as a soup of microplastics. The dimensions and depth of the patch are continuously changing.

Scientists had been aware of the growing problem of plastic debris in the world’s oceans since the late 1980s. However, the Great Pacific Garbage Patch came to public attention only after 1997, when yachtsman Charles Moore, returning home after participating in the biennial Transpacific Race, chose a route that took him through the North Pacific subtropical gyre. He found himself traversing a sea of plastics. When he returned to the area the following year, he discovered that the patch had grown in both extent and density. Moore began making speeches and writing articles – notably a 2003 essay in *Natural History* magazine – and he changed the mission of the Algalita Research Foundation, which he had founded in 1994 to improve water quality along California’s coast. The organization now focuses on studying and publicizing the problem of plastics in oceans, in particular in the Great Pacific Garbage Patch. A 2006 series of articles in the *Los Angeles Times* about the garbage patch won a Pulitzer Prize and raised general awareness of the problem.

In 2015 and 2016, the Dutch-based organization Ocean Cleanup found that the density of the debris in the garbage patch was much greater than expected and that the plastics absorbed pollutants, making them poisonous to marine life. The Great Pacific Garbage Patch is the best known of several such zones, others of which exist in the Atlantic and Indian oceans.

Section – A : English

37. Select the appropriate option to complete the sentence.

The word 'Great' in the name 'Great Pacific Garbage Patch' alludes to the _____.

a) vastness of the ocean
b) magnitude of the issue
c) uniqueness of the location of the garbage patch
d) extent of the garbage patch

38. Which is the contextual clue that best helps us understand the meaning of 'gyre'?

a) continuously changing
b) carried along
c) clockwise rotation
d) invisible bits

39. Select the appropriate option to fill the blank.

The 'photo' in *photodegradation* points to the role of _____ in the degradation of the plastic.

a) water
b) sun
c) type of plastic
d) duration of plastic at coast

40. Which of the given literary devices does the writer use in the line, 'He found himself traversing a sea of plastics.' ?

a) pun
b) symbolism
c) irony
d) imagery

41. Select the option that displays a title likely to belong to an article of the 2006 series.

a) Marine Life Conservation
b) Trash to Infiltrate the Food Chain
c) Marine Debris and Trash
d) Ocean Cleanups Around the World

Section – B : Logical Reasoning

42. Which of the following assumptions is/are necessary to conclude that plastic waste emerging from land would be the smallest in size as it accumulates in the Great Pacific Garbage Patch ?
    a) Extent of photodegradation is inversely related to time spent by plastic in oceanic water.
    b) Plastic waste emerging from land and other sources are of somewhat equivalent sizes at the source of origin.
    c) Both a) and b)
    d) Neither a) nor b)

43. A researcher showed that for every thousand kilometres a piece of plastic travels through oceanic water, it breaks down into 100 pieces. Each of those pieces would then also break down into 100 more pieces upon traveling a thousand kilometres. This phenomenon is analogically equivalent to _____
    a) Reproduction of amoeba – each amoeba splits into two in a certain period of time; which then again split into two in the same period of time.
    b) A train locomotive accumulating two coaches at each station it crosses.
    c) Case-load of a Court increasing as a result of more fresh cases being filed every day compared to cases being disposed in the same day.
    d) All the above

44. It was found that between two pieces of plastic, the lighter one travels at twice the speed of the heavier one. If there are ten pieces of plastic (each with a different weight) that start from the same geographical location, the speed of the fastest piece would X times the speed of the slowest piece. X is
    a) 10 b) $2 \times 10 = 20$ c) $2 \times 9 = 18$ d) $2^9 = 512$

45. Theoretically, filtering out all plastics from water bodies flowing into the sea and preventing direct disposal of any plastic from land into sea would
    a) Eliminate the Great Pacific Garbage Patch over a sufficiently long time period.
    b) Stop the growth of the size and depth of the Great Pacific Garbage Patch over a sufficiently long time period.
    c) Stop the speed of growth of the size and depth of the Great Pacific Garbage Patch over a sufficiently long time period.
    d) All the above

46. A teacher wants to demonstrate the futility of Ocean Cleanup. She believes that unless plastic-removal is faster than plastic-accrual, the overall size and depth of the Great Pacific Garbage Patch would stay stagnant or may even increase. Which of the following analogies can she draw to drive home her argument ?
    a) A filled bucket eventually empties as a result of an open outlet at the bottom of the bucket.
    b) Water level in a partially filled bucket with an outlet at its bottom rises if the amount of water coming through the inlet is faster than the amount of water that goes out through the outlet.
    c) Water level in a partially filled bucket with an outlet at its bottom goes down if the amount of water coming through the inlet is slower than the amount of water that goes out through the outlet.
    d) Both b) and c)

47. From the passage, it is clear that both plastic accumulation and oceanic pollution are negatively affecting marine life. As a scientist, you conduct a series of experiments to determine the extent (if any) of their contribution to degradation of marine life. The details of the experiments and their results are below :
    i. Check if plastic accumulation in sterile, non-polluting conditions affects marine life. It turns out that marine life is negatively affected. The measurement of the effect is X units.
    ii. Separately, check if any kind of pollution in some non-plastic environment affects marine life. It turns out that marine life is not affected at all.
    iii. Separately, check if pollution absorbed by accumulated plastic affects marine life. It turns out that marine life is negatively affected. The measurement of the effect is 2X units.

    What, if anything, can be concluded from the experiment ?
    a) Pollution is always dangerous to marine life.
    b) Pollution is dangerous for marine life only if it takes place in an environment where plastic has accumulated.
    c) Plastic accumulation poses no threat in a non-polluted environment.
    d) None of the above conclusions can be drawn.

48. It is found in a series of experiments that big pieces of plastic (defined as being larger than $100cm^2$ in size) take T amount of time to break into halves due to photodegradation, and smaller pieces of plastic (defined as being smaller than $10cm^2$ in size) take T/3 amount of time to break into halves due to photodegradation, which of the following is correct ?
    a) Rate of photodegradation is inversely related to size of original piece of plastic.
    b) Rate of photodegradation is directly related to size of original piece of plastic.
    c) Rate of photodegradation is independent of size of original piece of plastic.
    d) Rate of photodegradation is not dependent on any factor other than size of original piece of plastic.

V. Primogeniture

All titles are inherited by the oldest eligible child. Note that a dead child's progeny takes precedence over younger siblings. If no eligible descendants exist, the ruler's oldest eligible sibling is preferred. If lateral branches provide no candidate, the line of succession moves up to the primary parent* and repeats the aforementioned steps.

*the father if patrilineal marriage, the mother if matrilineal marriage

Ultimogeniture

All titles are inherited by the youngest eligible child. Note that a dead child's progeny takes precedence over older siblings. If no eligible descendants exist, the ruler's youngest eligible sibling is preferred. If lateral branches provide no candidate, the line of succession moves up to the primary parent* and repeats the aforementioned steps.

*the father if patrilineal marriage, the mother if matrilineal marriage

House seniority

All titles are inherited by the oldest eligible house member.

Note : The above rules of inheritance can take the following forms : gender-neutral; male preference, where younger men take precedence over older women; and vice versa for female preference.

Disowning

If a person is validly disowned, his/ her position in the line of succession ceases to exist. Only a person who has become a ruler in accordance with any of the rules of succession mentioned above can disown a person in the line of succession. A person in the line of succession may also choose to adopt monkhood, which automatically results in his/her permanent removal from the line of succession.

Section – A : English

49. Select the option that completes the following correctly.

Precedence: priority :: _____

a) progeny : offspring
b) lateral : vertical
c) eligible : privileged
d) primary : secondary

50. Select the option that can be the most suitable introductory line to this text.

a) Inheritance laws served as important means of preserving both the size of the property and the power and prestige.
b) What distinguishes the Western Property System from the systems of most is that its category of private property is a default category.
c) Public regulation of land use has increased drastically in the 20th century.
d) A will is valid if it meets the formalities of the law, which usually, but not always requires that it be witnessed.

51. Select the option that correctly reflects in the given part of the line. “If lateral branches provide no candidates…”
a) interrogation b) consequence c) condition d) reason

52. Select the option that substitutes the underlined words in the given sentence without changing its meaning.

‘If a person is validly (1) disowned, his/her position in the line of succession ceases (2) to exist.’
a) (1) technically ; (2) begins
b) (1) unanimously ; (2) tries
c) (1) justifiably ; (2) desists
d) (1) functionally ; (2) struggles

53. Monkhood results in a permanent removal from the line of succession because of its feature of _____.
a) recognising a higher power
b) renouncing the material world
c) embracing a new home
d) establishing new relationships

Section – B : Logical Reasoning

54. A ruler’s first-born son, at the moment of his birth, is first in the line of succession. This statement is _____
a) Always correct with respect to the rule of primogeniture.
b) Always correct with respect to the rule of house seniority.
c) Capable of being correct in case of ultimogeniture.
d) All the above

55. A ruler’s last-born son, at the moment of his birth, is first in the line of succession. This statement is _____
a) Always correct with respect to the rule of ultimogeniture.
b) Never correct with respect to the rule of house seniority.
c) Capable of being correct in cases of primogeniture.
d) All the above

56. Different rules of inheritance can never create situations where the same person is first in the line of succession. This statement is _____
a) Correct if seen only in context of the rules of primogeniture and ultimogeniture.
b) Not correct even if it is seen only in context of the rules of primogeniture and ultimogeniture.
c) Correct if seen only in context of the rules of primogeniture and house-seniority.
d) Both a) and c)

57. Y is the youngest child of X, the current ruler, who has 5 other children (each of them older than Y). Y is first in the line of succession. Which of the following inferences can be drawn for certain about their realm from the above two statements ?
   a) If the rule of primogeniture is followed, then Y's elder siblings have all been disowned.
   b) Even if one or more of Y's elder siblings were not disowned, it is possible that the rule of primogeniture is followed.
   c) The only possible rule governing their realm is the rule of ultimogeniture.
   d) All the above

58. Which of the following scenarios is/are possible ?
   a) A realm follows the rule of house-seniority. The ruler's eldest brother.
   b) Even if one or more of Y's elder siblings were not disowned, it is possible that the rule of primogeniture is followed.
   c) The only possible rule governing their realm is the rule of ultimogeniture.
   d) All the above

59. X is the ruler of a realm. X has three younger sisters : W, Y and Z (in increasing order of ages). X is married to A, with whom he has three sons (B, C and D (in increasing order of ages)) and two daughters (E and F (in increasing order of ages)). F is younger than B. W is older than D. E is married to P and has two children : Q and R (in increasing order of ages). E dies. Stricken by grief after E's death, X dies. Assuming the realm follows gender-neutral ultimogeniture, the throne passes to _____
   a) W b) F c) B d) Q

60. In the facts of the question above, if the realm followed the rule of house seniority, the throne would pass to _____
   a) Z b) D c) F d) R

VI. If you have ever watched a Grand Prix, you may have asked yourself, 'how do Formula One cars generate downforce ?'

Motorsports is all about speed. Being the fastest around will mean victory. But there is a limit to how fast one can travel on the ground without the car taking off. For attaining great speeds a car needs to remain firmly on the ground and have a good grip on the racing track. This means that all cars need to generate a downward force sufficient enough to keep them firmly on the ground for the speed that they intend to attain.

One way to remain on the ground at great speeds is to increase the weight of the car. But an increased weight will need more power to drive the car and make the handling of the car difficult. The alternative to this is to create the required force to stay grounded. Downforce can be generated from the air flowing around the car and will increase as the speed of the car increases.

The wings of an aeroplane help it to take off in the air at a specified speed. The same wing, if installed inverted on a car can make the car stay firmly on the ground. Just like in an aeroplane, as the speed of the car increases, the wings will press the car more firmly on the ground, thereby making handling of the car through twists and turns easier at high speed. This force that presses the car to the ground is called downforce.

Aerodynamic downforce plays an important role in the performance of Formula One cars, DTM, Indy cars and touring cars. Good grip on the racing track is equally important as the power generated by a racing car engine. Good ground adhesion gives the car stability and better cornering ability. Hence a racing car must generate a ground force equal to several times its weight.

Modern Formula One cars can generate as much as 5G downforce. That means, at full speed, the effective weight pressing down on the track will be 5 times the weight of the car. Almost all the surfaces of a Formula One car are engineered to produce downforce. The downforce by the front portion of the car has to be balanced by the downforce produced by the rear portion.

While the downforce on either side of the car can be balanced by symmetry, the downforce between the front and the rear cannot. This downforce has to be balanced by design. Most of the downforce in Formula One cars is produced by the wings and by diffusers. The downforce required by the car for ultimate performance will vary from track to track and on the conditions of the track.

While too much front downforce could lead to understeer, too much downforce generated by the rear portion could lead to oversteer. The balancing of the downforce between the front and the rear can be done by careful designing of the body parts of the car. The balancing act of the downforce also comes with an increased drag on the car.

Section – A : English

61. Select the option that correctly sorts facts (F) and opinions (O).
    i. Grand Prix is worth watching.
    ii. Formula One cars are beautifully designed unlike other types of cars.
    iii. Symmetry is unable to address the downforce between the front and rear of a racing car.
    iv. The weight of a racing car has to be far less than the ground force generated.

    a) F- (iii) & (iv); O- (i) & (ii)
    b) F- (i), (ii) & (iii); O- (iv)
    c) F- (ii) & (iii); O- (i) & (iv)
    d) F- (iv); O- (i), (ii) & (iii)

62. Select the idiomatic expression that addresses the given text, most appropriately.

    a) A vicious cycle
    b) Two can play at the game
    c) Dot the i's and cross the t's
    d) The tip of the iceberg

63. What type of text could the given piece, best be categorised under ?
a) analytical b) expository c) descriptive d) inspirational

64. In the line, 'The alternative to this is to create the required force to stay grounded.', what is the nature of meaning for 'staying grounded', that the writer DOES NOT refer to ?
a) metaphorical b) exact c) non-figurative d) literal

65. Select the most appropriate option as a concluding remark for the given text.
a) Racing regulations make it hard to gain an advantage over competitors.
b) The total aerodynamic package of the race car is emphasized now more than ever before.
c) We can understand the downforce concept both mathematically and logically.
d) Downforce ensures that cars are firmly planted on the road at speed.

Section – B : Logical Reasoning

66. If the orientation of the wings in a Formula One car were reversed (and all other things remain equal), the effective weight pressing down on the track would be X times the weight of the car. X is
a) = 1 b) > 1
c) < 1 d) Cannot be determined

67. A super car has a greater acceleration and top-speed compared to a Formula One car, but does not have wings that generate even half the downforce as compared to a Formula One car. The super car would still handily lose a race against a Formula one car. Which among the following statements is correct the race track ?
a) The race track is straight.
b) The race track has at least a few turns.
c) The race track is made of soft, rubber-y surface.
d) The race track is made of asphalt.

68. Without downforce-generating apparatus in a Formula One car, the drivers would ____
a) A Formula One car without any apparatus affecting aerodynamics would act like an aeroplane
b) Need to slow their car down to make turns.
c) Need to gain a lot of weight (or add weight to the car) to keep the car on the ground.
d) All the above

69. Assume that an object enters into free-fall if the force attracting it towards the earth is less than the force pushing it away from the earth. Further assume that all objects on earth are pushed away from it with a force equal to 1G. A Formula One car, therefore, _____?
a) Is in free-fall at all times during a race.
b) Is not in free-fall at any time during a race.
c) Is in free-fall at some (but not all) times during a race.
d) Cannot be determined.

70. Downforce generated by the wings of a Formula One car creates force towards the floor of the car thereby keeping the floor of the car closer to the surface it is being driven on. As mentioned in the passage, this downforce can be around 5 times the gravitational force exerted by the earth on the car. This implies that _____
   a) A Formula One car, if driven at a high enough speed, can drive upside-down in a tunnel (i.e., on the roof of the tunnel) without falling down.
   b) A Formula One car cannot drive upside-down in a tunnel (i.e., on the roof of the tunnel) at all.
   c) Gravity and downforce always act in the same direction.
   d) Both b) and c)

71. In a race among ten drivers (A, B, C, D, E, F, G, H, I and J, who started in this order, i.e. A started 1^{st} and J started 10^{th}), D, E and F made 2, 2, and 5 overtakes, respectively. No one else made any overtakes. What are the new respective positions of D, E and F ?
   a) 2^{nd}, 3^{rd} and 1^{st}
   b) 3^{rd}, 2^{nd} and 1^{st}
   c) 1^{st}, 2^{nd} and 3^{rd}
   d) Cannot be determined

72. How many overtakes does a person starting 10^{th} in a race need to make to get to 1^{st} position, assuming no other person makes any overtakes ?
   a) 9 b) 10 c) 11 d) 8

VII. Mining cryptocurrency was a great way to use your best graphics card to make a little money on the side. Being able to use an idle GPU to crunch numbers when not playing games allows you to make the most of the performance available. Unfortunately, since we originally created this guide, the crypto markets have crashed and Ethereum has moved to a proof of stake.

While it's not as easy to make a tidy earning with your GPU mining cryptocurrencies as before, there may be some other coins that may be worth it if you're mindful of energy use and initial cost. The absolute best gaming graphics card does not equal the best value and returns for mining using your PC. We've got a recommendation for everyone here.

What is the best GPU for crypto mining ?

Choosing the best graphics card for crypto mining isn't as simple as picking the absolute most expensive card you can locate and calling it a day. There are various factors to consider when shopping around for a new GPU to (hopefully) make some money with. The most important factor of any GPU for crypto mining is efficiency — you want a high hash rate for as little electricity as possible.

Take our highest recommendation here, for example. It's the NVIDIA GeForce 3060 Ti, an incredible GPU for gaming, but it's also excellent for crypto mining. It won't win awards for the highest hash rate, but for the more affordable price, it'll get you up and running without issue. If you wanted something a little cheaper without sacrificing too much in performance, the NVIDIA GeForce RTX 2070 is your guy.

But there are countless other GPUs that are worth considering and not only from NVIDIA. The AMD Radeon RX 5700 XT is our favorite GPU for value, offering an impressive hash rate for the asking price. Then there's the AMD Radeon RX 580, which is perfect for those on a tight budget who wish to save a few Bitcoins or Ethereum to weather a financial storm.

You don't have to spend much at all to make money mining cryptocurrency. So long as the hash rate will pull in coins for you to sell and make enough to cover electricity costs, you're already in the green. Once you factor in a few months to pay off the GPU, you're in profit — and that's not taking into account the resale value of the card itself.

When deciding on a GPU for crypto mining, you need to bear in mind a few factors. Do you want to pay more upfront now and potentially earn higher returns ? Or do you feel as though the mining scene will dissipate slightly with lower returns and wish to spend only a small amount on a GPU to make a little extra on the side ?

The cryptocurrency market is a financial one, and that means it's extremely susceptible to media coverage and human emotion. Take the damning environmental reports about Bitcoin that coincided with the Chinese crackdown to send the price spiraling. If you're about to spend $2,000 on a GPU to mine cryptocurrencies, you best be sure you can at least recuperate the initial purchase cost.

This is why we're not recommending only the most powerful (and expensive) GPUs available today. That doesn't make sense in the current climate, but it's also outright bad advice for those new to the wonderful world of mining digital currency. Unlike gaming, where only the best GPU you can afford will do, choosing one for crypto mining is a little more challenging.

What about all other GPUs for crypto mining ?

There are plenty of GPUs out there, and many of them offer considerably high hashrates, making them ideal for cryptocurrency mining. We couldn't include every graphics card here, and so this collection only includes handpicked recommendations that cover multiple price ranges.

So long as the GPU you consider buying will make more money than the electrical cost to run the PC, you're good to go. Leave it running for a few months, and you'll have accumulated enough to pay off the card. You could stop here and sell the card to recuperate some of the initial cost or continue with passive income.

Section – A : English

73. Select the appropriate option to complete the sentence.

The writer uses the word 'crunch numbers' in the first paragraph to communicate that it involves _____.

a) generating unique algorithms to develop recreation products
b) solving algorithms that help solve money-matters
c) large-scale processing of numerical data
d) gathering numerical data for financial research

74. Select the option that correctly reflects what the idiom in the given sentence means.

'Choosing the best graphics card isn't as simple as picking the absolute most expensive card, you can locate and calling it a day.'

a) not compromising on quality
b) making informed choices
c) getting confused
d) ceasing work

75. Select the option that displays what aspect the text titled 'What is best GPU for crypto mining' DOES NOT present.

i. information
ii. prediction
iii. suggestion
iv. precaution
v. introduction

a) i, ii and iv
b) ii and v
c) Only iii
d) i and iii

76. What is the writer's most likely intent of using question headings in this text ?

a) retain a certain measure of deniability
b) compel the reader to agree with explanation that follows
c) create an atmosphere of uncertainty and suspense
d) present information in a systematic chronology

77. Select the option that displays words similar in meaning to 'recuperate', from the last line of the text.

a) represent, remove, regain
b) renew, return, represent
c) remove, retain, reinstall
d) regain, recover, retrieve

Section – B : Logical Reasoning

78. On the basis of this article, a rational person decided that X was a better GPU for crypto mining than Y. He found that the initial cost of X was much lower than Y. It therefore follows that :

a) X's hashrates were higher than Y's
b) X's hashrates were lower than Y's
c) X's hashrates were the same as Y's
d) Cannot be determined

79. If total cost of mining N bitcoins using GPU X was lower than the total cost of mining the same number of bitcoins using GPU Y, then it follows that :

a) X's per-unit-time electricity consumption is lower than Y's per-unit-time electricity consumption
b) X's per-unit-time electricity consumption is more than Y's per-unit-time electricity consumption
c) X's cost price is lower than Y's cost price
d) Cannot be determined

80. What is the relationship between profits made using crypto-mining and hashrates ?
   a) High hashrates necessarily lead to high profits
   b) High hashrates necessarily lead to some profits
   c) Low hashrates cannot lead to profits
   d) None of the above

81. Assuming that the cost price and hashrates of two GPUs are identical, which of the following statements is true ?
   a) The profits made by crypto-mining using the GPUs in different time-periods and thereafter selling the GPUs would be identical.
   b) The profits made by crypto-mining using the GPUs in the same time-period and thereafter selling the GPUs would be identical.
   c) The profits made by crypto-mining using the GPUs in the same time-period and thereafter selling the GPUs could be different.
   d) None of the above

82. GPUs are made of infinitesimally small chips made out of semiconductors. Due to the pandemic, companies manufacturing these chips had to shut down. Assuming that the prices of cryptocurrencies and electricity remained constant, this would lead to
   i. Higher cost prices of GPUs
   ii. Lower profits made by people mining cryptocurrency
   iii. Lesser hashrates of GPUs
   iv. Losses for people mining cryptocurrency
   a) i, iii, iv b) i, ii c) i, iv d) i only

83. A certain extremely expensive GPU has the best hashrates among all GPUs. This GPU would
   a) Have high resale value b) Have high electricity consumption
   c) Give less profit in crypto-mining d) None of the above

84. A goes to a shop. At the shop are two salesmen – X and Y. X always says the truth. Y always speaks falsehoods. X and Y are aware of each other's tendencies. A does not know which salesman is X and which salesman is Y. Both salesmen say to A, "If you asked the other salesman, he would tell you that GPU G1 is better than GPU G2." What can be said about G1 and G2 ?
   a) G2 is better than G1 b) G1 is better than G2
   c) G1 is the same as G2 d) Cannot be determined

VIII. Who are your first cousins ?

Family members who are considered first cousins share grandparents with you. If your mom or dad have siblings, and those siblings have children, the kids are your first cousins! To your mom and dad, they're nephews and nieces, but to you, they're first cousins. Often these are the relatives people mean when they say, "she's my cousin." If they're not adopted, you share about 1/8 of your DNA with your first cousins!

So what are second cousins ?

Second cousins have the same great-grandparents as you. Think of it this way : your mom's first cousin's child is your second cousin. Or, your grandpa's brother's grandchild (your dad's aunt's grandchild) is your second cousin. You're in the same generation, they're just not as closely related.

What about a second cousin once removed ?

A cousin once removed means they're from the generation immediately above or below you. So your first cousin once removed would be your first cousin's child or your parent's first cousin. Your second cousin once removed is your second cousin's child or your parent's second cousin.

So a cousin twice removed is… ?

"Twice removed" means that there's a two generation gap : this cousin is from either your grandparents' generation, or your grandchild's generation. So your first cousin twice removed would be your grandparent's first cousin or your first cousin's grandchild. Your second cousin twice removed is your second cousin's grandchild or your grandparents' second cousin.

And what about third cousins ?

Third cousins share the same great-great-grandparents! Your third cousin is your mom's great aunt's great-grandkid. OK, that's a little confusing. How about this: your great-great-uncle's great-grandchild is your third cousin. You might need another look at the chart. Or you can just call them "cousin."

There's a knack to remember which cousin is which. First, second, and third cousins (and so on unto infinity cousins) are an equal number of generations removed from the common ancestor. First cousins are both the second generation removed from their shared grandparents. Second cousins are the third generation removed from shared great-grandparents. So : cousin plus one is the number of generations back.

So "grand" doesn't mean cousins ?

The word "grand" means that there's a two-generation gap between the people : your brother's grandchild is your grand-niece, and your mom's father is your grandfather. There is an exception : Your parents' sibling is your aunt or uncle, but your parents' aunt or uncle is usually referred to as a great-aunt or -uncle, despite the two-generation gap rule. Grand-aunt just sounds a bit weird.

But "great" usually goes with "grand" ?

The use of "great" is usually paired with grand, and it means that there is a three-generation gap between you and your relative. Your niece's grandchild is your great-grandniece or -nephew, and your grandkid's kid is your great-grandchild! Of course, there's another exception for aunts and uncles : Your mom's uncle is your great-uncle, but your mom's great-uncle is your great-great-uncle.

Section – A : English

85. What does the writer convey via the use of exclamation marks in the first paragraph of the text ?
   a) dramatic effect
   b) ambiguity
   c) astonishment
   d) conviction

86. Which aspect of the text indicates that the writer is engaging with the reader ?
   a) The paragraphing
   b) The punctuations
   c) The conclusion
   d) The headlines

87. In the text titled, 'And what about third cousins ?', what does the word 'chart' allude to ?
   a) pictures or photographs
   b) anecdotes
   c) pedigree
   d) family communication

88. The confusing relationships in the text can be best applied to _____.
   a) ted talk
   b) stand up show
   c) debate
   d) awareness rally

89. Select the appropriate option to fill the blank.
   When the writer offers a 'knack' to remember which cousin in which, she recognises the fact that the information can be _____ will be welcome.
   a) dense and a method to paraphrase it
   b) mind-boggling and a tip to simplify it
   c) irrelevant and a reminder suggesting otherwise
   d) mundane and a digression

Section – B : Logical Reasoning

90. Talking about the woman in a picture, X says, "Oh, I do miss my great-aunt! Doesn't she look awesome in this picture ? You know, her daughter and my mother taught me how to play cricket." Which of the following assumptions would need to be made to determine that the woman in the picture was X's great-aunt on the maternal side ?
   a) The woman in the picture was X's mother's aunt
   b) The woman in the picture was X's grandmother's aunt
   c) X's great-aunt's daughter and X's mother were siblings
   d) None of the above

91. X's grandson's paternal grandson's sister's father's father's father is X's
a) Son
b) Daughter
c) One of a) or b)
d) Grandson

92. X and Y are sisters. A is X's grandson's niece. Y is A's
a) Great-grand-aunt
b) Great-great-aunt
c) Great-great-niece
d) Great-grand-niece

93. Who among the following would be X's second cousin, once removed ?
a) X's father's father's brother's grandchild
b) X's father's father's brother's son
c) X's father's father's sister's granddaughter
d) None of the above

94. X is A's first cousin. Y is X's first cousin. Z is Y's first cousin. What is the closest relationship possible between X and Z ?
a) Sibling
b) First cousin
c) Second cousin
d) Third cousin

95. Who is the common ancestor between X and Y, who is X's first cousin twice removed ?
a) X's grandparent's grandparent and Y's grandparent
b) X's grandparent and Y's grandparent's grandparent
c) Either a) or b)
d) Neither a) nor b)

96. X's father's aunt is X's
a) Great-aunt
b) Grand-aunt
c) Great-great-aunt
d) None of the above

IX. Wesley Hohfeld, a Harvard law professor in the early part of the 20th Century, developed an analytical framework for understanding interests in property. Hohfeld's eight terms are arranged in two tables of 'correlatives' and 'opposites' that structure the internal relationships among the different fundamental legal rights.

Jural Opposites :

Right	Privilege	Power	Immunity
No-right	Duty	Disability	Liability

A privilege is the opposite of a duty ; a no-right is the opposite of a right. A disability is the opposite of a power ; an immunity is the opposite of a liability.

Jural Correlatives :

Right	Privilege	Power	Immunity
Duty	No-right	Liability	Disability

"Correlatives" signifies that these interests exist on opposing sides of a pair of persons involved in a legal relationship. If someone has a right, it exists with respect to someone else who has a duty. If someone has a privilege, it exists with respect to someone else who has no-right. If someone has a power, it exists with respect to someone else who has a liability. If someone has an immunity, it exists with respect to someone else who has a disability.

A right can be enforced by a lawsuit against the person who has the correlative duty. A privilege negates that right and duty, and typically would be asserted as an affirmative defense in the lawsuit. A power is the capacity to create or change a legal relationship. For example, when someone makes an offer of a contract, that gives the offeree the power to create a contract by accepting the offer (or not). If the power to create the contract is exercised, then both parties have rights and duties with respect to each other. Courts have power, only if plaintiffs or prosecutors exercise their power to commence a lawsuit. Sovereign states are immune because courts lack power over them, in which case courts are said to have a disability with respect to sovereigns.

If I "own" property, it means that I have various rights with respect to the thing constituting my property--the "bundle" of sticks or rights. I probably have the right to exclude and everyone else in the world has a correlative duty not to use my property. Some people may have a privilege, however, as to fly over it. I also have power with respect to my property because I can create rights in others, as by transfering some or all of the property to them, as by creating an easement, which gives the grantee certain rights *vis-a-vis* others and certain rights and privileges *vis-a-vis* me.

Section – A : English

97. The text is an example of a passage that is
    a) literary
    b) descriptive
    c) argumentative
    d) informative

98. Select the words from the text that correctly substitutes the underlined words in the following sentence :

    She gained <u>exemption</u> from the <u>accountability</u> of paying excessive maintenance, when the apartment owner changed.
    a) power, defence
    b) privilege, offeree
    c) respect, contract
    d) immunity, liability

99. Which option includes a foreign word used in the English language from the text ?
    a) correlative b) plaintiff c) *vis-a-vis* d) grantee

100. Select the option that can be used as a title from the text.
    a) All Rights Reserved
    b) Fine Print
    c) Letter of the Law
    d) Burden of Proof

101. Select the option that includes information that is an appropriate fit into the passage.
   a) Hegel, Kant, Hume and others say that 'right' refers to the power of self-expression. However, Duguit opposes this vehemently. Another theorist of Rights is Ihering, a great German jurist.
   b) Human rights are those which considering their rationality, faith, age, race is intrinsic to all human beings. One of the great achievements of the U.N. is the creation of a comprehensive body of human rights law.
   c) A legal right is an interest accepted and protected by law. If these rights get violated then the person has the right to move the Court for enforcing rights.
   d) Any debasement of any legal right is punishable by law. Employment and discrimination laws provide the legal framework defining an employee's rights to freedom from being discriminated against by the employer.

Section – B : Logical Reasoning

102. If X has a right *vis-à-vis* everyone else, and Y has a privilege *vis-à-vis* X, then X has a ___ *vis-à-vis* Y.
   a) No-right b) Duty c) No-duty d) None of the above

103. X and Y enter into a contract that provides as follows : "The quantum and time of payment, if any, shall be determined by A on the basis of the parties' performance of their obligations under this contract." Here, A has _____ *vis-à-vis* X and Y.
   a) Immunity b) Right c) Power d) Disability

104. Every person can travel on any road, unless it is blocked by a person who owns that road. Every person has _____ *vis-à-vis* the owner of the road.
   a) A right b) A privilege c) An immunity d) None of the above

105. In the facts of the question above, the owner of the road has _____ *vis-à-vis* everyone else.
   a) A right b) A privilege c) An immunity d) None of the above

106. If A has a right to claim damages from B, then B has _____ to pay damages to A.
   a) Duty b) Liability c) Immunity d) Disability

107. The owner of land can lease the property to any other person. Under that lease, the owner can allow sub-leasing. The owner of the land has _____ *vis-à-vis* the property.
   a) Right b) Power c) Immunity d) Liability

108. If X infringes Y's copyright, Y can sue X. Y has _____ *vis-à-vis* X.
   a) Right b) Power c) No-duty d) Immunity

X. The compass is one of the oldest navigational tools we have. Since mankind began to understand more about navigation, compasses have been crucial to the achievement of major feats such as the first transoceanic voyages and the circumnavigation of the globe. None of this would have been possible without the aid of the compass in performing navigation calculations over long distances.

Early explorers had to use local landmarks and the stars to navigate. This made it very difficult to travel to far or unknown destinations. Compasses were one of the key breakthroughs that made such voyages possible. So how exactly does a compass work ?

A compass works by detecting and responding to the Earth's natural magnetic fields. The Earth has an iron core that is part liquid and part solid crystal, due to gravitational pressure. It is believed that movement in the liquid outer core is what produces the Earth's magnetic field. Like all such fields, the Earth's magnetic field has two poles - North and South. These magnetic poles are slightly off from the Earth's axis of rotation, which is used as the basis of the geographic poles - however the magnetic and geographic poles are close enough to allow a compass to serve as a valuable navigation tool, especially when adjustments are made for the polar differences - such adjustments being referred to as declination.

In September 2019, for the first time in over 360 years, compasses at Greenwich pointed true north. Most of the time, however, compasses don't actually point precisely towards the North Pole.

True north is the direction that points directly towards the geographic North Pole. This is a fixed point on the Earth's globe. Magnetic north is quite different : it is the direction that a compass needle points to as it aligns with the Earth's magnetic field.

The magnetic North Pole shifts and changes over time in response to changes in the Earth's magnetic core : it isn't a fixed point.

This difference between true North and the North heading on a compass forms an angle, referred to as declination. Declination varies from place to place because the Earth's magnetic field is not uniform - it dips and undulates.

Section – A : English

109. Select the option that corresponds to a 'feat'.
a) The diversion of traffic
b) A student's tribute to the mentor
c) An acrobatic performance
d) The cancellation of a flight booking

110. The writer refers to the compass as a "key" breakthrough, to highlight its _____.
a) importance
b) scientific nature
c) ease of use
d) novelty

111. Select the option that can be used, both as a noun as well as a verb, in the given form.
a) uniform, magnetic, point
b) Only uniform
c) uniform and core
d) point, iron and core

112. Identify the meaning of the adjective in the given line from the text.

'..... compasses at Greenwich pointed true north.'
a) aimed
b) precise
c) topmost
d) sharp

113. Which action suitably corresponds with 'undulates' ?
a) praying
b) walking a dog
c) sharing a secret
d) dancing

Section – B : Logical Reasoning

For Questions 114 – 117 :

5 towers made by civilisation X were declared to be protected heritage building. Uniquely, four of them are placed geographically such that they are the vertices of a square. The fifth is placed at the point of intersection of the two diagonals of the square. Let the towers be named A, B, C, D and E. The following information is given to you about the five towers :

i. C, A and B are in a straight line (in no particular order) that runs from south-east to north-west.
ii. If one looks directly east from B, no tower is visible. This is not true for A and D.
iii. If one looks directly north from D, a tower is visible.

114. Based on the above information, which tower is in the centre ?
a) A
b) B
c) C
d) Insufficient information

115. If one seeks to travel to D from A, one has to go
a) East
b) South-east
c) West
d) South

116. If one seeks to travel to B from A, one has to go
a) East
b) South-east
c) West
d) Cannot be determined

117. At sunset, A's shadow points _____
a) Towards B
b) Towards C
c) Towards D
d) Towards E

118. A compass (circular in shape) consists of two parts : a magnetic needle that points towards the magnetic north, and a circular piece of paper with directions written on it. If, somehow, the piece of paper rotates a quarter-circle counter-clockwise, which geographic direction does needle point towards ?
a) Approximately east
b) Exactly east
c) Approximately west
d) Exactly west

119. A is holding a compass at the time of sunrise. He points it towards the direction of the sunrise and sees that it reads "SW". This means that the compass has rotated _____
a) 135 degrees counter-clockwise or 225 degrees clockwise
b) 135 degrees clockwise or 225 degrees counter-clockwise
c) 45 degrees clockwise or 315 degrees counter-clockwise
d) 45 degrees counter-clockwise or 315 degrees clockwise

120. In the facts of the question above, what actual direction is "NW" on the compass pointing towards ?
a) North
b) South
c) East
d) West

PART – 2

General Knowledge and Current Affairs

121. Who won the Nobel Peace Prize, 2022 ?
a) Ales Bialiatski
b) Annie Ernaux
c) Svantee Paabo
d) John Clauser

122. In order to reduce plastic waste in India, the Indian government in July, 2022 banned _____
a) All plastic bags
b) Single-use plastic
c) Only polyethene bags
d) Only toothbrushes

123. There is a fear that certain nanoplastics would become a part of human food, thereby causing severe harm to the human body. What is the size of one nanometre ?
a) 10^{-9} m
b) 10^{-6} m
c) 10^{-12} m
d) 10^{-3} m

124. X water body connects the Pacific Ocean to the Atlantic Ocean. Identify X.
a) Panama Canal
b) Strait of Magellan
c) Both a) and b)
d) Neither a) nor b)

125. The following Indian driver is currently participating in Formula Two series :
a) Narain Karthikeyan
b) Jehan Daruvala
c) Jack Doohan
d) Karun Chandhok

126. Before adopting Riyal as its currency, Qatar's currency was equivalent to which foreign (to Qatar) currency ?
a) US Dollars
b) Canadian Dollars
c) Indian Rupee
d) UAE Dirham

127. As a result of air pollution and nearby sewage, the _____ is reported to be turning yellow. Built in the 17^{th} century, it is one of the seven wonders of the world.
a) Taj Mahal
b) Statue of Liberty
c) Christ the Redeemer (statue)
d) The White House

128. Who among the following rely on medicines to cure mental illnesses ?
a) Psychologists
b) Psychiatrists
c) Both a) and b)
d) Neither a) nor b)

129. Twitter, a social media platform, was recently acquired by Elon Musk. Which of the following entities is not owned/ controlled by Elon Musk ?
a) Solar City
b) Neuralink
c) Waymo
d) The Boring Company

130. Which of the following statements is correct about Fundamental Duties in the Constitution of India ?
a) Fundamental Duties were part of the original Constitution
b) A person can be sued merely for failure to abide by Fundamental Duties
c) Both a) and b)
d) Neither a) nor b)

131. Human Rights Day is celebrated on
a) 26 January
b) 10 December
c) 1 March
d) None of the above

132. How many Youth World Titles in Chess have been won by Grand Master Praggnanandhaa ?
a) None
b) One
c) Two
d) Three

133. The first Indian to have won a Medal in Asian Cup Table Tennis is
a) Sreeja Akula
b) Archana Kamat
c) Manika Batra
d) S. Gnanasekaran

134. After winning Gold Medal in Olympics, Neeraj Chopra has also won the Javelin throw in
a) Commonwealth
b) Diamond League
c) Both a) and b)
d) None

135. The first Indian to win a Medal in Olympics Badminton is
a) P. V. Sindhu
b) Prakash Padukone
c) Saina Nehwal
d) Gopichand Pullela

136. The first Indian to have won the All England Badminton Championship is
a) Gopichand Pullela
b) Prakash Padukone
c) P. V. Sindhu
d) Saina Nehwal

137. The Prime Minister of which country was in news for dancing in a 'wild party' ?
a) Finland
b) New Zealand
c) Canada
d) None

138. The present Chairman of the National Human Rights Commission is
a) Justice Arun Kumar Mishra
b) Justice H. L. Dattu
c) Justice Pinaki Chandra Ghose
d) Justice P. C. Pant

139. How many Amendments have been made to the Indian Constitution so far ?
a) 103 b) 104 c) 105 d) 106

140. The Supreme Court in _____ upheld the constitutional validity of the EWS reservation.
a) State of Tamil Nadu v. Union of India b) EWS Association v. Union of India
c) Janhit Abiyan v. Union of India d) State of Maharashtra v. Union of India

141. The new Election Commissioner who joined in November 2022 is
a) Rajiv Kumar b) Arun Goel
c) Sushil Chandra d) Justice Kuldeep Singh

142. How many World Heritage sites are there in India ?
a) 12 b) 28 c) 40 d) 52

143. India's rank in the Global Hunger Index out of 121 countries is
a) 89 b) 107 c) 98 d) 112

144. The 2022 G20 Meeting was held in November 2022 in
a) Bali b) Rome c) Beijing d) New Delhi

145. The National Education Policy, 2020, excluded the following disciplines from its ambit
a) Law b) Medicine c) Technical d) Both a) and b)

146. Which among the following states admitted more foreign tourists in 2021 ?
a) Goa b) Karnataka c) Maharashtra d) Kerala

147. Recently the IMF approved a loan of US$ 2.9 billion to
a) Myanmar b) Sri Lanka c) India d) Nepal

148. The Foreign Universities can set up their institutions in
a) GIFT city b) Metropolitan Cities
c) District Headquarters d) Municipal Towns

149. The name of the privately built rocket that was launched from Sriharikota in November 2022 is
a) Skyroot b) Vikram – S c) Arya – B d) Chand – I

150. The Voters Day in India is celebrated on
a) 26th January b) 26th November
c) 25th January d) 25th November

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