

1. Ans. B.

Let the current age of father is X,

Current age of sun is Y,

1 year ago, $X-1=(Y-1)4$,

$$X=4Y-3\text{..... (1)}$$

After 6 years, $X+6=(Y+6)2+9$,

$$X+6=2Y+12+9,$$

$X-2Y=15\text{..... (2)}$, by solving equation 1 and 2,

$$4Y-3=2Y+15,$$

$$2Y=18,$$

$$Y=9, X=33,$$

So, the ratio is, $33/9=11/3$ that means 11::3.

2. Ans. B.

Pipe A can fill tank in 12 minutes, so in 9 minutes it will fill $9/12$ that means $\frac{3}{4}$ tank,

Remaining $\frac{1}{4}$, filled by tank B

Tank B fill a tank in 16 minutes, so it will fill $\frac{1}{4}$ tank in 4 minutes.

3. Ans. A.

Let the length of rectangle is 100, and width is 50

So area is $=100 \times 50$,

Now length increase by 60%, so new length is $=160$ so to maintain same area,

$$160 \times Y = 100 \times 50,$$

$$Y = 500/16,$$

$Y=125/4, = 31.25$, that is new width,

So, percentage decrease = $(50-31.25) \times 100/50=2 \times 18.75=37.5\%$.

4. Ans. C.

Bronze is an alloy of copper but consist 12-12.5% tin in that. So, it is an alloy of both copper and tin.

5. Ans. B.

Hygrometer is the instrument which is used to measure the humidity. This instrument is also known as psychrometer.

6. Ans. C.

In organic farming we use genetically modified seeds and in that no insecticide and pesticides are used for farming and in that method of farming we use crop rotation because due to crop rotation soil organic matter does degrade as quickly.

7. Ans. A.

In the green pigment of leaves magnesium is present.

8. Ans. D.

Kanha tiger reserve located in the Madhya Pradesh has Bhoorsingh the 'Barasingha' as it's mascot.

9. Ans. A.

Maquis or Macchia is a shrubland biome in the Mediterranean region, typically consisting of densely growing evergreen shrubs.

Chaparrals is a shrub land or healthland plant community found primarily in the US state of California and in the northern portion of the Baja California peninsula.

Fynbos is a small belt of natural shrubland, or heathland vegetation located in the Western Cape and Eastern Cape provinces of South Africa.

10. Ans. D.

Maithon project – Barakar river

Salal project – Chenab river

Rana pratap sagar project – chambal river

Tehri project – Bhagirathi river.

11. Ans. D.

According to question they will meet in 9 hours , because in 9 hours A will travel 36 km distance and B will travel-
 $2+2.5+3+3.5+4+4.5+5+5.5+6=36$ km, and the total distance is 72 ,so they will, meet midway between A and B.

12. Ans. D.

A got highest marks.

$B > D$, as we know the E had not obtained lowest marks, so possible arrangements are

$A > C > E = F > B > D$,

$A > E = F > C > B > D$,

$A > B > C > E = F > D$,

So only because of statement second, we can find the one with lowest marks.

13. Ans. D.

Simple Interest for 2 year is 1440, that means for one year 720 and we know for first year both compound interest and simple interest are same.

So, for first year compound interest = 720,

For second year= 780, because difference is=60,

So, rate = $60 \times 100 / 720 = 100 / 12 = 50 / 6 = 25 / 3\%$

14. Ans. A.

Bhopal gas tragedy happened due to leakage of Methyl Isocyanate gas. It was the deadliest gas tragedy in the history of India. It destroyed the life of many generation of the people.

15. Ans. C.

Minamata disease caused by the mercury contaminated water. It was first discovered in Minamata city of Japan that's why it is called as Minamata Disease.

Blue baby syndrome caused by the nitrate contaminated water.

16. Ans. C.

Wool is a polymer which is made up of protein. Wool is extracted from sheep. Rubber, cotton, and Jute do not make up of protein.

17. Ans. C.

Sucralose is an artificial sweetener and sugar substitute. The majority of ingested sucralose is not broken down by the body, so it is noncaloric.

18. Ans. B.

Nomadic elephant is a military exercise between India and Mongolia.

19. Ans. C.

In 2017, the Government decided to present the budget from 1st February, so that ministries start all activities from the commencement of financial year. For the first time in independent India rail budget merged with the general budget, that is there will only one budget that is General budget.

Government also decided to removal of plan and non plan classification of expenditure to facilitate a holistic view of allocations for sector and Ministries.

20. Ans. C.

This scheme was launched in Haryana by Prime minister Narendra Modi, under the Beti Bachao Beti Padhao Abhiyan. It aims to enhance the strength of girl children across the country. The account can be open by parents of the girls up to age of 10.

The minimum deposit of one thousand and maximum one lakh fifty thousand in a year. All the contributions are eligible for tax benefits under section 80C of the income Tax act.

There is one provision also under this scheme that is girl can withdraw 50% of money after reaching age of 18 for higher education.

21. Ans. D.

Vishti or forced labour was already common before the Gupta rule, there was a passage in Vishnu purana refers that the Gupta's enjoyed all the territories along the Ganga up to Pragma.

Mehrauli inscription suggests that Chandragupta fought against a Confederacy of enemies in Bengal and also led a campaign into the Punjab.

Saurashtra was also the part of the Gupta empire.

22. Ans. A.

Allahabad prashasti notable for containing later inscriptions attributed to

the Gupta emperor Samudra Gupta. Also engraved on the stone are inscriptions by the Mughal emperor Jahangir, from the 17th century. It clearly represents the Gupta empire as the epicentre of a complex web of varied political relationships.

Line 20 of this refer to his conquest of south.

Line 23 refers to his Conquest of North.

Line 13-15, refers to his conquest of three kings.

23. Ans. A.

All the services related activities belong to Tertiary sector and all the agricultural activities, mining activities belong to primary sector.

24. Ans. A.

Rangrajan committee – Disinvestment of Shares in PSEs

Narsimhan committee – Banking sector reforms

Kelkar committee – Tax reform

Malhotra committee – Insurance reform

25. Ans. D.

Tamil Nadu won the Vijay Hazare trophy in 2017.

26. Ans. C.

Kishori Amonkar won the Padma Bhushan and Padma Vibhushan. And she was also fellow of Sangeet Natak Akademi and she was exponent of Jaipur Gharana. She died on 3rd April 2017.

27. Ans. A.

In 2017, Japan recognized the bitcoin as the legal payment system. In India bitcoin is not a legalized currency.

28. Ans. A.

The world As I see it – Albert Einstein

How to live Longer and feel better – Linus Pauling

The theory of Everything – Stephen Hawking

Indomitable Spirit – APJ Abdul Kalam

29. Ans. D.

Sharaf Qai was the deputy wazir of the Alauddin Khalji. There had been pearl fishing in the South Eastern Coast and Gulf of Mannar from very early times.

Ambassadors like Megesthenis and Historians like Pliny and Sencillus and Travellers like Marcopolo have left detailed notes on Pearl fisheries and pearl fishing in our coast.

Masalik-i-Absar the Arabic work vivek description of the functioning of iqui system under Muhammad bin Tughluq.

30. Ans. C.

Tomb of Giyasuddin Balban located in Mehrauli built in 1287, it was the first Islamic made its appearance in India and according to many first Islamic dome as well.

31. Ans. B.

Mauza is a type of administrative district, corresponding to a specific land area within which there may be one or more settlements. Before the 20th century, the term referred to a revenue collection unit in pargana or revenue district.

32. Ans. B.

In 1948, President of the Constituent assembly set up the Dhar commission under the S k Dhar, to study that, states can be organized on the linguistics basis or not. The commission outrightly rejected this because of threat to National unity.

33. Ans. D.

Tamil Nadu government appointed the Rajmanner committee in 1969, to study the central state relations under the chairmanship of P.V. Rajmanner.

34. Ans. A.

To pass the budget it has to be go through the certain stages. First of all the budget is present in to the Loksabha, after that the various departmental committees scrutinize the budget, after that appropriation bill passes that gives the permission to take out money to spend and finally the finance will passes.

35. Ans. D.

He is a famous sand artist, belongs to Odisha.

36. Ans. C.

The Goldman Environmental Prize is a prize awarded annually to grassroots environmental activists, one from each of the world's six geographic regions.

An iconic leader of social justice movements in India, Prafulla Samantara led a historic 12-year legal battle that affirmed the indigenous Dongria Kondh's land rights and protected the Niyamgiri Hills from a massive, open pit Aluminum ore mine.

He was one of the six winners, the other winners were

1. Wendy Bowman
2. Mark lopez
3. Rodrigo Tot
4. Uros Naveen
5. Rodrigue mogaruka katembo

37. Ans. C.

It is the process of interaction between people of different countries, companies of different countries and the interaction between the government of different countries.

Because of globalization the countries have been connected to each other, and the effect on one country can be seen on another country either in terms of economy, health issues and. Example 2008 economic crisis and all. So, there is no border between the countries if we see in the frame of globalization.

38. Ans. B.

These officials were present during Mauryan period-

Samahartri was the responsible for the department of revenue collection.

Sarnnidhatri was the treasurer

Sansthadhyaksha was the superintendent of markets

Antaravamshika was the chief of palace guards.

39. Ans. B.

Herman kulke wrote the state in India:1000-1700, it was published in 1995.

Brajadulal chattopadhyay wrote the making of early Medieval India, it was published in 1994.

Peter Jackson wrote The Delhi sultanate: A political and military history.

Sunil Kumar wrote the emergence of Delhi sultanate: AD 1192-1296.

40. Ans. B.

After the 1857 revolt the British crown took over all the territories possessed by the East India company and enacted Government of India act 1958, in that Act the office of the secretary of state for India created.

41. Ans. A.

K Vishwanath won the Dadasaheb Phalke award in 2014. It is India's highest award in Cinema, it given annually at the National Film Awards ceremony by the directorate of film festivals.

42. Ans. D.

Supplementary grants: The additional grants required to meet the required expenditure of the government.

Vote on account: Interim permission to spend money, because after budget presentation it takes some months for passing financial statements and appropriation bill and till then to meet expense vote on account is used.

Rule of lapse related to lapses of bill after dissolution of Lok Sabha, it has no relation with grants and all.

43. Ans. A.

In article 30 there is nowhere mention about the ethnic minorities, there are only linguistic and religious minorities.

And according to Article 30 minorities can establish and administer educational institutions of their choice.

44. Ans. C.

For film Rustom Akshay Kumar was chosen best actor in 64th National Film Awards in 2017.

45. Ans. C.

Initially both USA and china joined the Agreement, but when Donald Trump came in to the power, he decided to withdraw from the Paris climate Agreement .

Intended Nationally Determined Contribution, in which countries pledged to take steps to reduce carbon emission is an important part of this agreement and it is still present in the agreement.

46. Ans. D.

Eastcrine kire was born in 1959, to an Angami Naga Family in Nagaland, she is a poet and author currently lives in Northern Norway.

In 2015 she won the Hindu prize for the poetic Novel 'when the river sleeps. And it is the exploration of Naga spirit Universe.

47. Ans. B.

During the British Rule, the Britishers used the Indian capital for their benefits and transferred the Indian capital to the England. Laissez- Faire

is the system in which transaction between Private parties are free from Government intervention and during the colonial time Laissez-faire never promoted the Indigenous capitalism.

48. Ans. A.

Sangama dynasty 1336-1485

Saluva Dynasty 1485-1505

Tuluvas Dynasty 1491-1570

Aravidu is Dynasty 1542-1646

49. Ans. D.

English education Act of 1835 was proposed by the than Governor General William Bentinck on the Advice of Macaulay.

This act made the English the language of Instruction in Indian Education system.

Macaulay suggested that the existing oriental institution like the Sanskrit college and Madrasa, were to continue, but fresh awards of stipends to students of these institutions and the publication of classical texts must cease.

50. Ans. C.

Article 14 is valid within the territory of India, so either foreigner or Indian citizen living with in the territory of the country will get benefit of this Article.

51. Ans. B.

Article 15 of the Indian citizen is available to only the citizens of the India not for the foreigners and Article 16 is also available for Indian citizens only, but Article 21 is available to both India citizen and Foreign national within the territory of India.

Article 16 is about the equality of opportunity for all citizens in the matter of public employment.

52. Ans. C.

Granville Austin who was the American historian of Indian constitution conceptualized the constitution of India as Seamless web.

53. Ans. B.

Able prize is a Norwegian awarded annually by the king of Norway to one or more outstanding mathematician, in 2017 it was given to Yves Meyer.

54. Ans. C.

The Breakthrough prize in Fundamental Physics is awarded by the Fundamental Physics Prize Foundation, a not-for-profit organization dedicated to awarding physicist involved in fundamental research.

In 2017 it was Given to Joseph Polchinski, Andrew Strominger and Cumrun Vafa.

55. Ans. C.

Jhelum, Ravi, Beas, Satluj, Chenab these all are the river covered in Indus water Treaty.

56. Ans. D.

They often do not have the facility in society lower caste neighbourhoods. Access to better education, housing facilities than that of the higher castes is denied at that time Govt. Released the law for the protection of untouchable Classes.

57. Ans. C.

It broke out in Bengal not in Maharashtra.

It was against the Indigo planters not against the money lenders.

It was supported by the Intelligentsia of Bengal.

58. Ans. B.

Dominion status, Adult suffrage, unitary and democratic centre all were the recommendation of Nehru report 1928, but Separate electorate was not mention there. Separate electorate was introduced in Morley Minto reforms.

59. Ans. C.

The president is empowered to establish interstate council under Article 263, interstate council is a non-permanent constitutional body.

60. Ans. B.

Party less democracy is a democracy devoid of any political party. The idea was given by M.N.Roy, Mahatma Gandhi also supported this but finally put to action and solidified by Jai Prakash Narayan.

61. Ans. B.

In the Golak Nath vs. state of punjab judgement the Supreme Court declared that ,Parliament cannot amend any of the provision of Part III of the constitution of India ,but In kesavananda Bharti case supreme court introduced the concept of Basic features of the constitution , according to which Parliament can amend the provision of Part III without affecting the basic features of the constitution.

62. Ans. B.

After came into the power, The US president Donald Trump decided to withdrawal from the Transpacific partnership.

63. Ans. D.

Kaziranga National park is situated in Assam, and Brahmaputra and Diphlu river passes through this park but there are no railway Track passes through this.

64. Ans. D.

Pulitzer prize is an award for achievement in newspaper, magazine and online journalism, literature, musical composition in United states. In 2017 The underground Railroad novel won this prize.

65. Ans. D.

Provision of Gandhi Irwin pact are as follows:

- Discontinuation of salt march by the Indian national congress
- Participation of Indian National congress in 2nd round table conference
- Release of prisoners participated in Salt march
- Immediate release of all political prisoners of the civil disobedience Movement
- The return of confiscated land already given to the third parties.
- Reservations and safeguards to cover financial credit of India.

66. Ans. D.

The Treaty of Allahabad was signed on 12th August ,1765, between Mughal Emperor Shah Alam II, son of the Late Emperor Alamgir II and Robert Clive after the battle of Buxur of 1764. Treaty marks the beginning of the British rule in India, East India company got the Diwani rights or rights to collect taxes on behalf of the Mughal emperor in eastern province of Bengal, Bihar and Orissa.

Awadh was returned to Shuja-ud -daullah but Allahabad and Kora were taken from him.

Nawab of Awadh had to pay fifty lakhs of rupees as war indemnity to the East India Company.

67. Ans. B.

To secure full Indian support in the 2nd world War, Cripps mission came to India in 1942.

The mission offered Dominion status to India just after the war and mission also offered to formation of the Constitution making body.

But Indian leaders were demanding full independence not the Dominion status.

68. Ans. B.

Indira Sawhney vs union of India dealt with the issue of creamy layer among the backward classes. The creamy layer was created after the Mandal commission implementation by VP Singh's government.

69. Ans. B.

Originally there were 8 schedules in our Constitution. But now there are 12 schedules in our constitution. These 4 schedules are added after certain constitution amendments. 9 schedules was added to the Constitution by the first amendment act of 1951.

70. Ans. D.

Central Vigilance commission is the highest government body to address the governmental corruption. It was created in 1964, on the recommendation of Santhanam committee.

71. Ans. A.

Corruption perception Index released by Transparency international. Denmark is the least corrupt country in 2016.

72. Ans. D.

Nakshe portal was launched by union minister Dr. Harshvardhan on the 250th anniversary of Survey of India.

73. Ans. B.

On 1st May ,2016, PM Narendra Modi launched the Pradhan Mantri Ujjawala Yojana to provide LPG connections in BPL household from the Balia district of Uttar Pradesh. And the Government set target of 5 crores LPG connection under this yojana.

The main aim of this scheme is to provide clean fuel to the BPL household, for their safety and to reduce pollution.

74. Ans. A.

from 2005 until 2015 the award was given every two years to a living author of any nationality for a body of work published in English or generally available in English translation, but since 2016 the award has been given annually to a single book in English translation.

75. Ans. B.

Dada bhai Naoroji The Grand Old Man of India gave drain wealth theory, in that theory he mentioned that the wealth that was being drained out was potential surplus, that could generate more economic development in India, if invested in India. He also mentioned it in his book Poverty and Un-British rule in India.

During the British Rule, many Imperialists believed that if India comes into large capitalist's world, then this will take India towards modernization.

76. Ans. C.

The British legal scholars relied on Indian Pandits and Maulavis understanding of canons of authoritative texts. And Calcutta madrasa and Sanskrit college was established in 1783 and 1785 respectively. The Hindu law was codified between 1864 to 1947.

77. Ans. A.

During freedom struggle movement many leaders those were educated in western countries, like Mahatma Gandhi, Jawahar Lal Nehru, they used the derived method of western freedom struggle.

78. Ans. B.

A rainbow is a phenomenon which is caused by reflection, refraction and dispersion of light in water droplets resulting in a spectrum of light in the Sky. Sometimes we see two rainbows together, the primary with another less intense secondary rainbow about 10 degrees away.

Secondary rainbow is caused by double reflection of sunlight inside the water droplet.

79. Ans. C.

Chameleons change colour by changing the space between the guanine crystals, which changes the wavelength of light reflected off the crystals which changes the colour of the skin.

80. Ans. C.

The soil of humid tropics low in nitrogen, phosphorus and other nutrients and limited in their capacity to store nutrients, so soil of these areas is not that fertile.

Humid tropics is an area where temperature is consistently high, and humidity is also high. In these areas' plantation farming practised mostly.

81. Ans. C.

Among all the above Chile is in southern most latitude.

82. Ans. B.

Bum la pass located in Arunachal Pradesh. It is located 37 km away from Tawang. It is on Indo-china border.

83. Ans. B.

Ring of fire is a major area in Pacific Ocean where many earthquake and volcanic eruption occurs. It is an active seismic zone because we can see eruptions of volcanoes and earthquake frequently. About 90% of world earthquakes occur in this region. It is a zone of constructive plate margin.

84. Ans. C.

Tharu is the major tribe of Uttar Pradesh and Uttarakhand.

Irula, chenchu, and sumali tribes found in Kerala.

Garasia tribes found in Rajasthan and Gujarat.

Gaddi tribes are nomadic herders of Jammu and Kashmir and Himachal Pradesh.

85. Ans. A.

Tropical wet evergreen vegetation mainly found in areas where annual rainfall occurs more than 200cm and temperature is between 15 to 30°C, and due to the high rainfall average humidity exceeds 75%. And in these areas trees also shed the leaves.

86. Ans. D.

Corbett is in Uttarakhand and number 4 indicate the Uttarakhand.

Kanha is in Madhya Pradesh and number 2 indicate the Madhya Pradesh.

Neora valley is in West Bengal and number 3 indicate that location.

Betla is in Jharkhand.

87. Ans. A.

Sultanpur- Haryana

Nawabganj – Uttar Pradesh

Kulik- West Bengal

Attiveri- Karnataka.

88. Ans. A.

For finding unit place we divide by 10,

So, when 6374 divides by 10 it will give 4 as remainder and when we will divide 625 by 10 it will give 5 as remainder and when we will divide 313 it will give 3 as remainder.

So, when we multiply all these, we get 60 so 0 is the unit digit.

89. Ans. B.

In which we count rectangle those don't have same length and breadth. Because if length equals to breadth then it will be a rectangle.

In this we count 16 rectangles.

90. Ans. B.

If the dice is resting on the 3 dots, then the opposite number of dots will be on top.

In this 2 dice system, 2 dots, 6 dots and 4 dots cannot be opposite to 3 dots because there are on adjacent sides. So, there are two possibilities 1 or 5.

91. Ans. B.

Plastic is non degradable thing so it cannot be decomposed by any method or it cannot be decomposing by bacterial action.

92. Ans. D.

Carborundum is used as an abrasive because grains of silicon carbide can be bonded together by sintering to form very hard ceramics.

93. Ans. A.

Fluoride in toothpaste and drinking water, is like a constant 'repair kit' that helps protect teeth against tooth decay.

So major effect of long-term consumption of drinking water containing no fluoride is cavity of tooth.

94. Ans. D.

In 2009-10 the investment is maximum.

95. Ans. B.

Average investment in service sector = $(420+480+500+600+750)/5=550$

96. Ans. D.

In 2005-06, it was 500 and 2009-10 it was 800

So % change = $300 \times 100 / 500 = 60\%$.

97. Ans. D.

Let the 7 consecutive odd number is 1,3,5,7,9,11,13

The average of these number is $(1+3+5+7+9+11+13)/7=7$,

If we add next 3 number $(1+3+5+7+9+11+13+15+17+19)/10=10$

So, the average increases by 3.

98. Ans. B.

Total vote polled=4000,

Candidate Y get 40% of 4000, that means 1600,

So, X got 2400, so margin of defeat is 800.

99. Ans. C.

Diesel car are not good for environment, because these cars emits carbon mono oxide and nitrogen oxide. It produces large quantity of carbon monoxide at lower temperature but as temperature increase it start emitting nitrogen oxide. That's why there is need of electric vehicles in India, it will reduce the environment pollution.

100. Ans. C.

Biomagnifications is the process of increasing concentration of toxic chemicals in the tissues of tolerant organisms at successively high level of food chain.

101. Ans. D.

Nekton or necton refers to the aggregate of actively swimming aquatic organisms in a body of water.

102. Ans. A.

Ecological niche is a specific habitat of the organization. It describes how an species respond to the distribution of resource. And two species cannot have same ecological Niche.

103. Ans. C.

There are three conditions those are suitable for the formation of the thunderstorms:

- Moisture
- Instability
- Lifting

Instability is what allows air in the low levels of the atmosphere to rise into the upper levels of the atmosphere. Without instability, the atmosphere will not support deep convection and thunderstorms.

It is lift that allows air in the low levels of the troposphere to overcome low level convective inhibition.

104. Ans. C.

The Himalayan mountains are the young fold mountain. And Himalayan mountain system contains geosynclinal rocks. Himalayan mountain system is the mountain system that contains highest mountain ranges of World.

Many rivers have their origin in the Himalayan ranges, Indus and Sutlej are among them, they are antecedent rivers because they flow by cutting the rock.

Youngest of the five terrain-defining faults, the Himalayan Frontal Fault (HFF) is a series of reverse faults that demarcates the boundary of the Siwalik front of the Himalayan province with the alluvial expanse of the Indo-Gangetic Plains.

105. Ans. A.

Equatorial region is a mega thermal region. This region has high rain fall and high humidity.

Equatorial region is not a sclerophyll region because it does not contain sclerophyll vegetation.

Sclerophyll vegetation found mainly in Mediterranean region. And equatorial region is a least development region of the world.

In this region most of the rains intercepted by forest canopy and thus reaches ground slowly in the form of aerial streamlets.

106. Ans. D.

The product unity can be achieved if two reciprocal numbers are multiplied,

Let's take an example let two number is 2 and $\frac{1}{2}$ their product is 1, but Sum is $\frac{5}{2}$

Let's take 3 number 2, $\frac{1}{2}$ and 1, the sum is 1 but sum is $\frac{7}{2}$,

So we can see that sum of number can never be less than n.

107. Ans. B.

According to question,

$$A/20=3B/20,$$

$$A=3B..... (1)$$

$$B/10=C/5,$$

$$B=2C..... (2)$$

$$C=2000 \text{ as given,}$$

$$\text{So, } B = 4000,$$

$$A= 12000,$$

$$\text{So total } A+B+C=18000.$$

108. Ans. B.

25% failed in mathematics and 12% failed in English.

10% failed in both, so % student failed only in mathematics is 15%

And % of student failed in english only is 2%, so total failed % student is 27%,

So, 73% student passed and 73%=292 so 1%=4

So total number of students =400

109. Ans. C.

Genecology which studies the genetic variation of a species.

Synecology the ecological study of whole plant and animal community.

Autecology the ecological study of species.

Ethology the study of human behaviour.

110. Ans. A.

Net primary productivity is highest for the tropical rain forest.

111. Ans. B.

Ozone layer present in the Stratosphere is very useful for mankind. Because it absorbs harmful ultraviolet -B radiation cause skin cancer.

112. Ans. B.

Minamata disease caused by Mercury pollution.

Itai-Itai disease caused by Cadmium pollution.

Blue baby syndrome caused by Nitrate.

113. Ans. A.

Necessary condition for growth of Coral reef:

- Coral needs to grow in shallow water where sunlight can reach easily
- Coral needs clear water
- Coral needs warm water to survive that is temperature from 20°C to 32°C
- Corals are sensitive to sediment and pollution, so they need clean water to survive.
- Corals need saltwater to survive and requires certain balance in ratio of salt to water.

114. Ans. C.

During British rule there were three categories of land tenure statement Zamindari, Mahalwari, and Ryotwari.

In zamindari system, Zamindars were recognised as owner of the lands. They were given rights to collect tax from peasants. This system was prevalent in Bengal, Bihar, Orissa and Varanasi.

In Mahalwari system, land was divided in to mahals. Each mahal comprises one or more villages. Ownership rights were vested with peasants. The village committee was held responsible for collecting Taxes. It was prevalent in Agra, Punjab etc.

In Ryotwari system, ownership right was handed to peasants, and British cover directly collected taxes. It was prevalent in Madras province.

115. Ans. B.

In March ,2017 The Uttarakhand high court accorded the status of living human entities to two sacred rivers Yamuna and Ganga.

116. Ans. D.

If all student are boys and all boys are dancers then,

All student are dancers also.

117. Ans. D.

Condition of divisibility with 11 is that, the difference in sum of odd terms and even terms either 0 or multiple of 11,

So, in 13Y7, $1+Y-10$, $Y-9$, either this equals to 0 or multiple of 11.

So, the possible value of Y is 9, so the number is 1397.

So, when $4X3$ added to 984 sums is 1397,

So $1397-984=413$, so the value of X is 1,

So, value of $X+Y$ IS 10

118. Ans. C.

When 2880 divide by 5, it will give 576, which is a square of 24.

119. Ans. C.

Mass number = Total number of neutrons+ Total number of protons,

Alpha particle is a nucleus of helium so it contains both neutron and proton, so alpha radiation will affect the mass number.

Beta is a electron, and mass number does not depend on electron, so it will not affect the mass number.

120. Ans. B.

The quark model was independently proposed by physicists Murray Gell-Mann and George Zweig in 1964.

121. Ans. C.

Chemical name of heavy water is Deuterium oxide.

122. Ans. B.

In liquid water due to the presence of hydrogen bonding, it becomes more denser than ice.

123. Ans. C.

Uttarakhand -963,

West Bengal -950,

Madhya Pradesh – 931,

Jammu Kashmir- 889.

124. Ans. C.

Sukinda is a chromite mine located in Odisha.

Hutti is a gold mine located in Karnataka.

Zawar is a Zinc mine located in Rajasthan.

Amjhore is a pyrite mine located in Bihar.

125. Ans. C.

Chagos archipelago is in Indian ocean, not in North Pacific Ocean, it is about 500 km south of Maldives.

gradeup