

WBCS Mains Exam. 2021 — Paper – IV (Series - A)

Answers with Explanation

1. (B) Tetra ethyl lead $[Pb(CH_3)_4]$ is used as an antiknock agent in gasoline and jet fuels. It is rapidly absorbed by the skin, lungs, and the gastrointestinal tract. It is converted to triethyl lead, which might be responsible for its toxicity. শ্রীচিভর্ষ
2. (D) The correct answer is option (D). The principal tributaries of the river Brahmaputra joining from right are the Lohit, the Dibang, the Subansiri, the Jiabharali, the Dhansiri, the Manas, the Torsa, the Sankosh and the Teesta whereas the Burhidihing, the Desang, the Dikhow, the Dhansiri and the Kopili joins it from left. Chambal is the tributary of Yamuna and Son is the tributary of the river Ganges.
3. (D) Cobalt 60 was widely used in external beam radiotherapy machines, which produced a beam of gamma rays which was directed into the patient's body to kill tumor tissue.
4. (A) The Montreal Protocol on Substances that Deplete the Ozone Layer (the Montreal Protocol) is an international agreement made in 1987. It was designed to stop the production and import of ozone depleting substances and reduce their concentration in the atmosphere to help protect the earth's ozone layer.
5. (B) Maximum biological damage is caused by Gamma rays which have immense penetrating power. So it can penetrate the inner cells of the body, ionize the cells. শ্রীচিভর্ষ
6. (C) Vikramshila Vihara was founded by Dharmapala. It was established during the late 8th Century or early 9th century. Just like Nalanda, Vikramshila was also a famous center of learning in eastern India. The ruins of Vikramshila can be seen in modern-day Bhagalpur in Bihar. Vikramshila was destroyed by Bakhtiyar Khilji. শ্রীচিভর্ষ
7. (B) Pollutants that are formed in the lower atmosphere by chemical reactions are the secondary air pollutants. For example - ozone.
8. (D) Mysore city is not located on a river bank. The city is located between two rivers: the Kaveri River that flows through the north of the city and the Kabini River, a tributary of the Kaveri, that lies to the south. Surat is situated on the bank of river Tapti. Agra is situated on the bank of river Yamuna. Cuttack is situated on the bank of river Mahanadi.
9. (D) Gasoline is not a biofuel. শ্রীচিভর্ষ
10. (B) The East India Association was founded by Dadabhai Naoroji in 1866, in collaboration with Indians and retired British officials in London. It superseded the London Indian Society and was a platform for discussing matters and ideas about India, and to provide representation for Indians to the Government. Naoroji delivered the first lecture to the Association on 2 May 1867. শ্রীচিভর্ষ
11. (B) Chloromycetin is an antibiotic used for meningitis, plague, cholera, and typhoid fever.
12. (A) Project 75 (I) succeeds the project 75 Kalvari class submarine for the Indian Navy. In this project Indian Navy builds diesel-electric attack submarines of the Kalvari class, which is built by Mazagon Dock Limited.
13. (A) Aqueous solution of $Fe(3)Cloride$ is acidic in nature, in aqueous solution it undergoes hydrolysis and form HCl which is strong acid.
14. (B) The correct answer is option (B). শ্রীচিভর্ষ Eutrophication is the process in which a water body becomes overly enriched with nutrients, leading to plentiful growth of simple plant life. The excessive growth (or bloom) of algae and plankton in a water body are indicators of this process. Eutrophication is considered to be a serious environmental concern since it often results in the deterioration of water quality and the depletion of dissolved oxygen in water bodies. Eutrophic waters can eventually become "dead zones" that are incapable of supporting life.
15. (B) Fuel cell works when there is potential difference. শ্রীচিভর্ষ
16. (A) Pascal is a unit of air pressure.
17. (A) 'Big Blue' is nickname of the company IBM.
18. (C) The win for deaf family drama 'CODA' marks the first time a streaming service took Hollywood's biggest prize. "CODA", the heartwarming movie about a deaf family with a hearing daughter, has won the prestigious best picture prize at the Oscars. শ্রীচিভর্ষ
19. (A) The Government of India observes 16 March as National Vaccination Day to acknowledge

- and appreciate the hard work of frontline health care workers to ensure the vaccination of every child. The theme of 2022 is 'Vaccines work for all'.
প্র্যাচিভর্স
20. (C) Joint Forest Management (JFM) in India originated from West Bengal at the Arabari Research Range in West Midnapur District in 1971 as an experiment. Government of India adopted this idea of involvement of village communities and NGOs in the regeneration, management and protection of forests with a circular dated June 1, 1990.
প্র্যাচিভর্স
21. (A) The Wars of the Roses, known at the time and for more than a century after as the Civil Wars, were a series of civil wars fought over control of the English throne in the mid-to-late fifteenth century, fought between supporters of two rival cadet branches of the royal House of Plantagenet: Lancaster and York. The wars extinguished the male lines of the two dynasties, leading to the Tudor family inheriting the Lancastrian claim.
22. (A) The Bishnoi movement is a social movement led by the Amrita Devi Bishnoi. The movement was founded in response to a massive deforestation program carried out by the rulers of Marwar in 1485.
প্র্যাচিভর্স
23. (D) National Education Day is observed to commemorate India's first 'education minister' Maulana Abul Kalam Azad.
24. (D) 'Chitrageeta' was the pen name of Satinath Bhaduri. The pen name of Samaresh Basu was Kalkut. The pen name of Budhadev Basu was Bipradas Mitra. The pen name of Sunil Gangopadhyay was Nil Lohit.
25. (A) Pandit Jasraj (28 January 1930 – 17 August 2020) was an Indian classical vocalist, belonging to the Mewati gharana (musical apprenticeship lineage). His musical career spanned 75 years resulting in national and international fame, respect and numerous major awards and accolades.
প্র্যাচিভর্স
26. (C) Flight Lieutenant Shivangi Singh, the country's first Rafale pilot, was a part of the Indian Air Force (IAF) tableau that featured in the Republic Day parade on Wednesday. She joined the IAF's fighter stream in 2017 and flew the MiG-21 Bison aircraft before being posted to a Rafale squadron based in Ambala.
27. (A) Activated sludge plants are used to treat municipal and industrial wastewater.
28. (B) 'Carnival of Hope' is an annual festival held in Venice city of Italy. The festival is being held in 2022 after a long gap. It was not conducted in the past two years due to COVID. The first Carnival of Venice was conducted after the military victory of Venice in 1162.
প্র্যাচিভর্স
29. (B) The 'Baal Swaraj Portal' has been designed to keep track of children who have lost one or both parents due to COVID-19.
30. (A) Sci-fi epic Dune won five prizes and brooding Western 'The Power of the Dog' was named best picture as the British Academy Film Awards returned Sunday with a live, blacktie ceremony after a pandemic-curtailed event in 2021. New Zealand filmmaker Jane Campion was named best director for The Power of the Dog, becoming only the third woman to win the prize in the awards' seven-decade history.
প্র্যাচিভর্স
31. (C) This is the third-highest civilian award in India and is conferred to people with achievements for service in any field including service rendered by Government servants including doctors and scientists, but exclude those working with the public sector undertakings. This award has a similar design to the Padma Vibhushan. All the embossing is done in gold.
32. (C) The concept of biosphere reserves has been evolved by UNESCO's Man and Biosphere programme (MABP). A biosphere reserve is a specified area in which multiple uses of the land is permitted by dividing it into zones, each for a particular activity. It helps in conservation of natural resources, promotes economic development, scientific research, monitoring and education. So, the correct answer is option C.
প্র্যাচিভর্স
33. (B) The Tattwabodhini Sabha was a group founded in Calcutta on 6 October 1839 as a splinter group of the Brahma Samaj, reformers of Hinduism and Indian Society. The founding member was Debendranath Tagore, previously of the Brahma Samaj, eldest son of influential entrepreneur Dwarkanath Tagore, and eventually father to renowned polymath Rabindranath Tagore. In 1859, the Tattwabodhini Sabha were dissolved back into the Brahma Samaj by Debendranath Tagore.

34. (B) Soap removes grease by the process of emulsification. It is a process of dispersing two or more immiscible liquids together to form a semistable mixture. প্র্যাচিভর্স
35. (A) The National Institute of Virology is one of the major Institutes of the Indian Council of Medical Research (ICMR). It was established at Pune, Maharashtra State in 1952 as Virus Research Centre (VRC) under the auspices of the ICMR and the Rockefeller Foundation (RF), USA. প্র্যাচিভর্স
36. (A) 'Pablo Picasso' is a famous 'Spanish Painter' and famous for 'Guernica Painting'.
37. (D) A semiconductor has two types of charge carriers that is holes and electrons. The conductivity of a semiconductor is sum of conductivities of holes and electrons.
38. (C) Hariprasad Chaurasia (born 1 July 1938) is an Indian music director and classical flautist, who plays the flute, in the Hindustani classical tradition.
39. (D) When fossil fuels burn carbon dioxide gas is produced which is a greenhouse gas.
40. (C) Bakelite is a thermosetting phenol formaldehyde resin, formed from a condensation reaction of phenol with formaldehyde. প্র্যাচিভর্স
41. (A) El Nino is a name given to the periodic development of a warm ocean current along the coast of Peru as a temporary replacement of the cold Peruvian current.
42. (C) Rangaswamy Cup is associated with hockey. Introduced in 1928, the Rangaswamy Cup, was originally known as Inter-Provincial Tournament meant to pick up players for the national team for the Olympics.
43. (D) Fluorine has highest electronegativity of 4
44. (A) Uranium 233 is produced by neutron irradiation of Thorium. প্র্যাচিভর্স
45. (A) The weakest force is Gravitational force.
46. (C) The thin film of water surface appears coloured because of thin-film interference.
47. (*) According to PSC the answer is Tshogdu. The Tshogdu was the unicameral legislature of Bhutan until 31 July 2007. The legislature had a total of 150 members. The National Assembly is the elected lower house of Bhutan's bicameral Parliament which also comprises the Druk Gyalpo (Dragon King) and the National Council. It is the more powerful house. প্র্যাচিভর্স
48. (C) Normal bp for most adults is defined as a systolic pressure of less than 120 and a diastolic pressure of less than 80.
49. (B) Guru Nanak Dev was born in 1469 in Talwandi, a village in the Sheikhpura district, to the west of Lahore. He was the founder of Sikhism and the first Guru of the Sikhs. He believed in the values of equality, fraternity, goodness, and virtue. The basis of Sikhism lies in the teachings of Guru Nanak and his successors. প্র্যাচিভর্স
50. (A) 'Radhakrishna Hari Kumar' is the current chief of Naval Staff of India.
51. (A) Chlorosis is caused by the deficiency of iron, magnesium or zinc. Among the options magnesium is the correct choice.
52. (D) According to PSC Salinization is accumulation of salts in animals. প্র্যাচিভর্স
53. (A) Palm oil (*elaeis guineensis*) is tropical oil, growing only within 10 degrees north or south of the equator. Indonesia is the largest palm oil producing country in the world followed by Malaysia, Thailand and Colombia. Indonesia and Malaysia produce around 85-90 percent of total global palm oil production.
54. (B) Nagarjuna Sagar Dam is a masonry dam across the Krishna River at Nagarjuna Sagar which straddles the border between Nalgonda district in Telangana and Palnadu district in Andhra Pradesh. World's largest masonry dam protected with 26 gates measuring 124.663m in height. প্র্যাচিভর্স
55. (C) The International Court of Justice is composed of 15 judges elected to nine-year terms of office by the United Nations General Assembly and the Security Council.
56. (C) Silent Spring is an environmental science book by Rachel Carson. Published on September 27, 1962, the book documented the environmental harm caused by the indiscriminate use of pesticides. Carson accused the chemical industry of spreading disinformation, and public officials of accepting the industry's marketing claims unquestioningly. প্র্যাচিভর্স
57. (A) Polytetrafluoroethylene (teflon) is a synthetic fluoropolymer used in various applications including non-stick coatings.
58. (A) Bhagwant Singh Mann is the current chief minister of Punjab and a leader of 'Aam Aadmi Party' (AAP). প্র্যাচিভর্স
59. (A) Lata Mangeshkar (born as Hema Mangeshkar; 28 September 1929 – 6 February 2022) was an Indian playback singer and occasional

- music composer. She is widely considered to have been one of the greatest and most influential singers in India. প্র্যাচিভর্স
60. (C) Broad spectrum antibiotics are the antibiotics which acts on both gram positive and gram negative bacteria, but in contrast to this penicillin acts effectively gram positive bacteria. So penicillin is not considered as broad spectrum antibiotic. প্র্যাচিভর্স
61. (C) The Kyoto Protocol was an international treaty which extended the 1992 UN Framework Convention on Climate Change that commits state parties to reduce green house gas emissions, which causes global warming.
62. (C) Chuar rebellion or Chuar revolt, also known as Jungle Mahal movement was a series of peasant movements between 1769 and 1809 by the tribal inhabitants of the countryside surrounding the Jungle Mahals settlements of Midnapore, Bankura and Manbhum against the rule of the East India Company (EIC).
63. (C) The Chipko movement was a forest conservation movement in India, originated in 1973 in Uttarakhand (earlier part of Uttar Pradesh). প্র্যাচিভর্স
64. (C) The dong has been the currency of Vietnam since 3 May 1978. It is issued by the State Bank of Vietnam.
65. (C) According to PSC Gondwana Colfields are found in Madhya Pradesh.
66. (C) DTP is a triple antigen vaccine is meant to protect against 3 diseases- diphtheria, tetanus and pertussis (whooping cough).
67. (D) A refrigerator is a reverse heat-engine that pump energy out of the inside of the fridge and into the surrounding area by the way of an electric motor.
68. (A) Diamond and graphite are allotropes of carbon.
69. (B) Silent Valley National Park is located in Kerala and famous for Lion-tailed Macaque.
70. (B) World Environment Day is celebrated on 5th June. World Environment Day 2022 is hosted by Sweden. "Only One Earth" is the campaign slogan, with the focus on "Living Sustainably in Harmony with Nature". প্র্যাচিভর্স
71. (A) No of moles of solute present in one kg of solvent is called molality of the solution.
72. (B) Copper sulphate pentahydrate is called blue vitriol.
73. (D) In human body there are 20 amino acids which are the building blocks of proteins. প্র্যাচিভর্স
74. (C) As there is no reducing H present in sucrose structure it is not a reducing sugar. To be a reducing sugar, there must be an aldehyde group present or a possibility of ketone group to be reduced.
75. (B) Azeotropic mixture is a mixture of two liquids which boils at on particular temperature like a pure liquid and distills over in the same composition. প্র্যাচিভর্স
76. (B) Humans cannot digest cellulose because they lack the enzymes essential for breaking the beta-acetyl linkages. The undigested cellulose acts as fibre that aids in the functioning of the intestinal tract.
77. (B) Decomposers also break down the bodies of dead organisms resulting in nitrogen being returned to the soil as ammonia. In some conditions, denitrifying bacteria in the soil break down nitrates and return nitrogen to the air. This is usually in waterlogged soil. Hence, making it unavailable for plant roots. So, the correct option is 'Denitrifying bacteria' প্র্যাচিভর্স
78. (D) The color of a star mostly indicates a star's temperature, and it can also suggest the star's age. Class O stars, which are blue in color, are the hottest, and class M stars, which are red in color, are the coldest.
79. (B) On 'Budget 2022' speech Finance Minister Nirmala Sitaraman announced a world class digital e-portal set up for skill development of vocational learners. প্র্যাচিভর্স
80. (C) The Battle of Buxar was fought on 22 October 1764, between the forces under the command of the British East India Company, led by Hector Munro, and the combined armies of Mir Qasim, Nawab of Bengal till 1764; the Nawab of Awadh, Shuja-ud-Daula; and the Mughal Emperor, Shah Alam II.
81. (D) The main duty of the pro-tem speaker is to administer the oath of office to new members of the house. প্র্যাচিভর্স
82. (D) Zika is spread mostly by the bite of an infected Aedes species mosquito (Ae. aegypti and Ae. albopictus). These mosquitoes bite during the day and night. প্র্যাচিভর্স
83. (B) Puducherry Lieutenant Governor Dr. Tamilisai Soundararajan inaugurated the Puducherry's first-ever Beach Festival I Sea PONDY-2022. The festival will be celebrated for four days

- in Puducherry Gandhi Beach, Pondy Marina and Sandunes of Paradise Beach. The Beach Festival includes various cultural events and contests to be held in the beaches. প্ৰাচিভাৰ্শ
84. (C) The Parliament of India passed an Act in 1972 for the protection of wildlife. In this Act, the government established schedules to protect plants and animals. Hunting of these species was strictly prohibited under this law.
85. (B) Noise of sound measurement is called decibels (dB).
86. (A) Dry ice is the solid form of carbon dioxide. It is commonly used as it does not have a liquid state and sublimates directly from the solid state to the gas state at atmospheric pressure. It is used primarily as a cooling agent, but is also used in fog machines at theatres for dramatic effects. প্ৰাচিভাৰ্শ
87. (A) The pyramid of numbers is inverted in the parasitic food chain. In this case, the primary producers are plants which are least in the number followed by primary consumers that is herbivores.
88. (A) The excess amount of CO_2 forms a thick blanket in the atmosphere which is transparent to sunlight but absorbs infrared radiation trapping heat near the earth's surface causing warming up of the interior.
89. (B) Ali Akbar Khan (14 April 1922 – 18 June 2009) was an Indian Hindustani classical musician of the Maihar gharana, known for his virtuosity in playing the Sarod.
90. (D) Grey revolution is associated with wool. It is to increase the production of wool. It is post of green revolution. Green revolution is associated with the greenery and post of this, grey revolution came. প্ৰাচিভাৰ্শ
91. (C) Dialysis is the process of separation of colloidal particles from crystalloids.
92. (D) Konkani writer Damodar Mauzo awarded 57th Jnanpith Award 2022. The country's highest literary award, the Jnanpith is bestowed on writers for "their outstanding contribution to literature". Jnanpith Award is a literary award presented by the Bharatiya Jnanpith organization to Indian writers every year.
93. (B) Ramsar site of West Bengal is East Kolkata Wetlands. প্ৰাচিভাৰ্শ
94. (D) Gyanodaya is an online education initiative by Adani foundation helping students from rural areas to learn more efficiently in Jharkhand's Godda district.
95. (D) The speed of sound in steel is 5960 m/s.
96. (C) The history of Indian Railways dates back to over 160 years ago. On 16th April 1853, the first passenger train ran between Bori Bunder (Bombay) and Thane, a distance of 34 km. It was operated by three locomotives, named Sahib, Sultan and Sindh, and had thirteen carriages. প্ৰাচিভাৰ্শ
97. (D) The radiant energy from the sun is due to nuclear fusion.
98. (D) The proper use of lubricants cannot reduce inertia as inertia depends upon the mass of an object and mass of an object cannot change.
99. (D) 'The Rock Garden' of Chandigarh is a sculpture garden, founded by 'Nek Chand Saini' in 1957. প্ৰাচিভাৰ্শ
100. (D) The value of universal gas constant depends on the units used for pressure, volume and temperature that is units of measurement.
101. (D) Mark Tully is the author of the book 'No Full Stops in India'.
102. (A) According to PSC Chlorofluorocarbon (CFC) is used in Refrigerator.
103. (D) The National Centre for Polar and Ocean Research, (NCPOR) formerly known as the National Centre for Antarctic and Ocean Research (NCAOR) is an Indian research and development institution, situated in Vasco da Gama, Goa. প্ৰাচিভাৰ্শ
104. (B) Maharishi Parasara was the first to use this term in his monumental classic "Brihat Parasara Hora Shastra" (BPHS) showing that this scientific basis of Astrology was at different stages of development and that the rules and principles had not been fully revealed.
105. (A) 'The Peer Panjal Tunnel' is an 11.215 km long railway tunnel located in 'Peer Panjal Range' of middle Himalayas of Jammu & Kashmir, India of Qazigund Town. It is a part of the 'Jammu Baramulla Line'.
106. (B) The compounds of transition metals show colours mainly due to electronic transitions between partially filled d-orbitals. In CuF_2 Cu is in a +2 oxidation state. So the electronic configuration of Cu^{+2} is $[\text{Ar}] 3d^9$. Therefore the compound will show colour. প্ৰাচিভাৰ্শ
107. (B) Sulphurous smog also known as London smog, develops due to high concentration of sulphur

- oxides in the air. This gas is a serious air pollutant. প্র্যাচিভর্স
108. (C) The Anushilan Samiti was established by Pramathanath Mitra, a barrister from Calcutta on 24 March 1902. It was headed by Barindra Kumar Ghosh, younger brother of Sri Aurobindo Ghosh.
109. (C) Gamma rays are a radiation hazard for the entire body. They can easily penetrate barriers that can stop alpha and beta particles, such as skin and clothing. Gamma rays have so much penetrating power that several inches of a dense material like lead, or even a few feet of concrete may be required to stop them. Gamma rays can pass completely through the human body; as they pass through, they can cause ionizations that damage tissue and DNA. প্র্যাচিভর্স
110. (D) The nuclear reactor performs the similar functions as that of furnace in the thermal power.
111. (C) The United Nations Security Council veto power is the power of the five permanent members of the UN Security Council i.e. USA, UK, Russia, France & China to veto any 'substantive resolution'.
112. (C) Velocity of wind is measured by anemometer. The speed of that wind can be measured using a tool called an anemometer. An anemometer looks like a weather vane, but instead of measuring which direction the wind is blowing with pointers, it has four cups so that it can more accurately measure wind speed. প্র্যাচিভর্স
113. (C) Dichlorodifluoromethane is a colourless gas usually sold under the brand name Freon-12, used as a refrigerant.
114. (B) Air pollution increases the risk of respiratory diseases, such as asthma, respiratory infections, and COPD, in children and adults.
115. (C) Action of catalyst depends on particle size and surface area. প্র্যাচিভর্স
116. (C) 'Jhansi Ki Rani' is the first technicolour film of India, directed and produced by Sohrab Modi in 1953.
117. (D) The East India Company was incorporated by royal charter on December 31, 1600. It was an English company formed for the exploitation of trade with East and Southeast Asia and India during the reign of Mughal Emperor Akbar (1556-1605). প্র্যাচিভর্স
118. (A) West Bengal is now divided into 23 districts which includes the newly formed Alipurduar district (formed on 25 June 2014), Kalimpong district (formed on 14 February 2017), Jhargram district (formed on 4 April 2017), and the splitting of the former Bardhaman district into Purba Bardhaman district and Paschim Bardhaman district (formed on 7 April 2017). প্র্যাচিভর্স
119. (B) The hardness of water is estimated by complexometric titration using EDTA.
120. (B) Control rods are used in nuclear reactors to control the rate of fission of the nuclear fuel – uranium or plutonium. Their compositions include chemical elements such as boron, cadmium, silver, hafnium, or indium, that are capable of absorbing many neutrons without themselves decaying. প্র্যাচিভর্স
121. (A) Lucknow Super Giants skipper KL Rahul surpassed batter Virat Kohli and became the fastest Indian to score 6000 T20 runs in terms of innings.
122. (C) In fireworks, the green flame is produced because of barium.
123. (D) 'Bharat Gaurav Scheme' launched by 'Indian Railways' to promote and attract tourism business. প্র্যাচিভর্স
124. (B) Chloroquinine is a drug to control Malaria.
125. (*) According to PSC the answer is Naxalbari movement. Actually, the revolt by Chakmas carried out to oppose the enhanced rent in the Rangunia estate. It was asserted under the leadership of Ranu Khan, the diwan of the Raja. Ranu Khan was the supreme military leader and followed guerrilla tactics to oust the company from the Hill Tracts.
126. (B) Industrial Development Bank of India (IDBI Bank) has informed the stock exchanges that its board has approved the reappointment of Rakesh Sharma as the managing director and chief executive officer of the bank for a period of three years, effective March 19, 2022.
127. (B) Liquified Petroleum Gas (LPG) is predominantly Propane and Butane. প্র্যাচিভর্স
128. (C) Satyajit Ray received Magsaysay Award for journalism, literature and creative communication arts in 1967. The Ramon Magsaysay Award, Asia's premier prize and highest honor, celebrates greatness of spirit and transformative leadership in Asia.

129. (A) Benzene and formaldehyde are examples of volatile organic compounds causing cancer.
130. (A) Modern atomic weight scale is based on C^{12} . The standard unit for expressing the mass of atom is amu (atomic mass unit). It is equal to 1/12 of the mass of an atom of carbon-12.
131. (B) Nitrous oxide, commonly known as laughing gas, nitrous, or nos, is a chemical compound, an oxide of nitrogen with the formula N_2O .
132. (B) The 'Raising and Accelerating MSME Performance (RAMP) programme is rolled out with a estimated cost of Rs. 6000 crores and implemented for 5 years to resilience and recovery of MSME sector. প্র্যাচিভর্স
133. (B) United Nations is an intergovernmental organization whose purpose is to maintain peace & security around the world Established in 1945 at New York City, USA.
134. (B) DDT was commonly used as a pesticide. On the prolonged use of the pesticide, there were many side effects observed. The plants were accumulated with these chemicals and the pesticide entered the food chain. The birds were affected due to the presence of the pesticide. The birds lay the eggs but due to the effect of this chemical, the egg shells were very thin. The shell break and the embryos did not develop. So, there was a failure in the hatching of the birds from the eggs. প্র্যাচিভর্স
135. (D) Creatine Phosphate helps in regeneration of ATP and ATP helps in muscle contraction. So, both would be the answer.
136. (D) The headquarters of the United Nations is a distinctive complex in New York City (USA). The United Nations has three additional, subsidiary, regional headquarters or headquarter districts. These are located in Geneva (Switzerland), Vienna (Austria), and Nairobi (Kenya). প্র্যাচিভর্স
137. (B) The 'Unique Land Parcel Identification Number' (ULPIN) is a 14 digits alphanumeric unique ID for land parcel in India.
138. (B) The sun is the source of almost all energy on Earth. It enables plants and other organisms to turn water and carbon dioxide into sugars through a process called photosynthesis. The sun releases light that travels many millions of miles through space. A unit of that light is known as a photon. Photons have properties of both particles and waves. প্র্যাচিভর্স
139. (A) The Kashmir Files is a 2022 Indian Hindi-language drama film written and directed by Vivek Agnihotri. The film presents a fictional storyline centred around an exodus of Kashmiri Hindus in the disputed region of Kashmir. প্র্যাচিভর্স
140. (C) Lakshya Sen is a young Badminton player, one of the key player of Indian maiden 'Thomas Cup' champion team. Born in Almora, Uttarakhand.
141. (D) Narmada originates from its source situated in the State of Madhya Pradesh. It forms the traditional boundary between North India and South India and flows westwards over a length of 1,312 km (815.2 mi) before draining through the Gulf of Khambhat into the Arabian Sea, 30 km (18.6 mi) west of Bharuch city of Gujarat. প্র্যাচিভর্স
142. (C) Supersonic planes speed is around 345 km/sec which greater than speed of light (~300 km/sec).
143. (D) The Partition of Bengal was announced on 20 July 1905 by Lord Curzon, the then Viceroy of India and commenced on 16th October 1905. After that Swadeshi Movement took place and finally, the British Government (Lord Hardinge) revoked the partition of Bengal in 1911. প্র্যাচিভর্স
144. (A) Bhopal tragedy happened on 2 December, 1984 due to the spill out of methyl isocyanate (MIC) from Union Carbide India Ltd's pesticide factory.
145. (A) Eutrophic water body is a highly productive water body rich in plant nutrients especially phosphates and nitrates.
146. (B) India's first commercial-scale biomass based hydrogen plant is located in Madhya Pradesh at Khandwa.
147. (D) Natural polymers have their sources in plant and animals for example starch, cellulose, rubber, protein etc. প্র্যাচিভর্স
148. (B) Earth Day is observed every year across the world on the 22nd of April. The theme this year is "Invest In our Planet" and its focus is on natural processes, emerging green technologies and innovative thinking that can restore the world's ecosystems. প্র্যাচিভর্স
149. (C) India's Sex Ratio at Birth (SRB) improved by 19 points at National level, from 918 in the year 2014-15 to 937 in 2020-21. This was announced during the Year End Review of Women and Child Development Ministry.

150. (A) Legendary singer Lata Mangeshkar, who passed away recently, was laid to rest with full state honours. Her career spanned more than half a century and she recorded thousands of songs in 36 languages. The singer was nominated to the upper house of India's parliament in 1999. She received India's highest civilian award, the Bharat Ratna, in the year 2001. প্র্যাচিভর্ষ
151. (A) Mauryan Dynasty was the first dynasty in 3rd - 4th Centuries BCE, that unified the subcontinent and contributed in spreading religion (Buddhism).
152. (D) Splitting of white light into its constituent colours is called dispersion.
153. (B) Fats have highest gross calorific value.
154. (B) Environment Protection Act, 1986 Act of the Parliament of India. In the wake of the Bhopal gas Tragedy or Bhopal Disaster, the [Government of India] enacted the Environment Protection Act of 1986 under Article 253 of the Constitution. Passed in May 1986, it came into force on 19 November 1986. প্র্যাচিভর্ষ
155. (B) Telineelapuram International Bird Sanctuary is located in Andhra Pradesh's Srikakulam district. Recently, mass deaths of migratory spot-billed pelicans happened at the Bird Sanctuary. According to government data, about 113 species of exotic birds come to these areas each year from Siberia, Russia, Malaysia, Hungary, Singapore and Germany for breeding.
156. (B) Latent heat of vaporisation can be calculated from Clausius-Clapeyron equation.
157. (C) An aerosol is a suspension of fine solid particles or liquid droplets in air or another gas. Examples of natural aerosols are mist, dust, geyser steam etc. প্র্যাচিভর্ষ
158. (D) 'INS Khukri' was a Type 14 frigate of the Indian Navy, sunk off the coast of Diu, by Pakistan submarine 'Hangor' on 9th December, 1971.
159. (C) 'Garampani Sanctuary' located in Anglong district of Assam. It is one of the oldest sanctuary containing hot water spring and waterfalls. প্র্যাচিভর্ষ
160. (D) The Himalayas are considered as Tectonic type of mountains. Himalayas are a type of young fold mountains. Fold mountains are formed due to collision of tectonic plates. প্র্যাচিভর্ষ
- When two tectonic plates collide they get compressed resulting in upliftment of Earth's crust. প্র্যাচিভর্ষ
161. (B) 'Northern Railway Zone' is the longest railway zone having 6807 kilometre route. It covers states of Punjab, Haryana, Himachal Pradesh, Uttarakhand & Uttar Pradesh. The headquarter of this zone is in 'New Delhi'.
162. (C) Invoking 133 (2) of the Karnataka Education Act-1983, the Education Department issued an order which says a uniform style of clothes has to be worn compulsorily. প্র্যাচিভর্ষ
163. (D) Trygve Halvdan Lie was born on 16 July 1896, in Oslo, Norway, the son of Martin and Hulda Arnesen Lie. He was educated at Oslo University where he obtained a law degree in 1919.
164. (A) Quantum statistics is discovered by Satyendranath Bose; he is best known for his work on quantum mechanics in the early 1920s, in developing the foundation for Bose statistics and the theory of the Bose condensate. প্র্যাচিভর্ষ
165. (D) 'The Gommateshwara Stone Statue is a 57 foot (17m) high monolithic statue on 'Vindhyagiri Hill' in the town of 'Shravanbelgola' in 'Karnataka'. It was carved of a single block of granite and it is the tallest monolithic statue in India. The statue is dedicated to the Jain figure 'Bahubali' and was built by Western Ganga Dynasty around 983 CE.
166. (D) The correct answer is all of the above. BOD is the biochemical oxygen demand which is related to the biological oxidation of the organic matter (inside the Bacteria) while COD is the chemical oxygen demand for the organic + inorganic matter. So logically COD is higher than BOD. প্র্যাচিভর্ষ
167. (B) A ligament is the fibrous connective tissue that connects bones to other bones. So, the correct option is 'Ligament'.
168. (C) Jhulan Goswami made history by being the first woman to claim 250 wickets in women's one-day internationals.
169. (B) Earth Day is an annual event on April 22 to demonstrate support for environmental protection. First held on April 22, 1970.
170. (D) An electric motor converts electrical energy to mechanical energy. প্র্যাচিভর্ষ
171. (B) The herbivores feeding on plants are primary consumers for example insects and cattle.

172. (D) Chlorination is the process of adding chlorine to drinking water to kill parasites, bacteria, and viruses. প্র্যাচিভর্স
173. (C) World Red Cross and Red Crescent Day is an annual celebration of the principles of the International Red Cross and Red Crescent Movement. World Red Cross Red Crescent Day is celebrated on 8 May each year. The theme of the World Red Cross Day 2022 is #BeHumanKind.
174. (C) i) Ex-situ conservation is done by preserving the components of biological diversity outside their natural habitats. It is done by conserving genetic resources, as well as wild and cultivated or species. Examples include Gene banks, Microbial cultures, Cryopreservation, etc. প্র্যাচিভর্স
ii) In-situ conservation is done by conserving the species in their natural habitats. It is the best way of biodiversity conservation. Examples include Sacred groves, National parks, etc.
175. (D) DDT and aluminium can be example of non-biodegradable pollutant. But DDT itself is an example of primary soil pollutant.
176. (D) Surface tension of liquid generally decreases with temperature increment and becomes zero at critical temperature. প্র্যাচিভর্স
177. (A) 'Mankombu Sambasivan Swaminathan' is an Indian agronomist, Agricultural scientist, plant geneticist and administrator. He is a global leader of the green revolution and also known as the 'Father of Green Revolution in India'
178. (D) 'Amravati' is the capital of 'Andhra Pradesh' located on the banks of river 'Krishna' in Guntur district. P.M. Narendra Modi laid its foundation stone on 22nd October, 2015.
179. (D) 'Centre for Development of Telematics' (C-DOT) established in 1984 and headquarter in 'New Delhi' comes under 'Ministry of Communication'. Sam Pitroda started C-DOT as an autonomous Telecom R&D organisation. 'Ashwini Vaishnaw' is the responsible minister and Dr. Rajkumar Upadhyay is the Executive Director of C-DOT. প্র্যাচিভর্স
180. (D) Calcium ions play an important part in the blood clotting, the increased calcium concentration which helps in the activation of proteins in platelets which is essential for the clotting of blood.
181. (D) The unit of energy in MKS system is joule. 1 Joule (J) is the MKS unit of energy, equal to the force of one Newton acting through one meter. প্র্যাচিভর্স
182. (A) The United Nations is an international organization founded in 1945 after the Second World War (1939 to 1945) by 51 countries committed to maintaining international peace and security, developing friendly relations among nations and promoting social progress, better living standards and human rights. The motto of UNO is "It's your world!". The headquarters of the United Nations is in Manhattan, New York City. প্র্যাচিভর্স
183. (A) Renewable energy resources are natural resources that can be regenerated continuously and are inexhaustible. They can be used again and again in an endless manner. Examples are solar energy, wind energy, hydropower, tidal energy etc.
184. (D) Monazite is a phosphate material containing rare earth metals. It is reddish in colour. It is an important ore for thorium, lanthanum, cerium. প্র্যাচিভর্স
185. (C) Minamata disease, sometimes referred to as Chisso-Minamata disease, is a neurological syndrome caused by severe mercury poisoning. So, the correct option is 'mercury'.
186. (B) Ozone hole is largest over Antarctica that is South pole. প্র্যাচিভর্স
187. (A) An ecosystem is a community of living organisms in conjunction with the nonliving components of their environment, interacting as a system. An ecosystem can be as small as a pond or as large as a rainforest. Ecosystems are analysed and studied as unique entities. However, all ecosystems feature an energy input such as the sun's heat which keeps life in the system going. The oceans are the world's largest ecosystems and are considered to cover the shore as far as tidal waters come in.
188. (C) 'Arundhati Roy' is the author of 'The God of Small Things' and also got 'Booker Prize' for this book in 1997.
189. (A) The correct option is A Harish Chandra Mukherjee. The "Hindu Patriot" was edited by Harish Chandra Mukherjee. It kept people updated about the happenings of the 1857 revolt. It instilled patriotism and nationalism among the people. প্র্যাচিভর্স

190. (C) 'Jim Corbett National Park' is the first National Park of India established in 1936 and located in 'Nainital', Uttarakhand, named after famous hunter and naturalist 'Jim Corbett'.
191. (C) Itai-itai disease was the name given to the mass cadmium poisoning of Toyama Prefecture, Japan, starting around 1912.
192. (C) Washing Soda is a hygroscopic compound that can absorb water from the moisture present in air. Chemical formula of washing soda is $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$. প্র্যাচিভর্স
193. (A) 'Seemabaddha' is the 1971 released film was directed by 'Satyajit Ray'.
194. (B) United Nations Conference on Environment & Development also known as the Rio-de-Janerio Earth Summit or the 'Rio Conference' held from 3rd-14th June, 1992 to created a response for member states to reduce the emission of Green House Gas replace the use of fossil fuels and less production of toxic components like lead in gasoline.
195. (C) 'Neeraj Chopra' won gold medal for India in Tokyo Olympics in Men's Javelin Throw event, with a throwing distance of 87.58 m.
196. (B) Escherichia Coli is used as an indicator organism to determine pollution of water.
197. (B) 'Dilwara Temples' is a group of Shwetambar 'Jain Temples' located at 'Mount Abu' of Rajasthan The earliest were built by 'Bhima Shah' and supposedly designed or at least financed by Vastupala, Jain minister of Dholka.
198. (C) Humayun's tomb is the tomb of the Mughal Emperor Humayun in Delhi, India. The tomb was commissioned by Humayun's chief consort, Empress Bega Begum (also known as Haji Begum), in 1558, and designed by Mirak Mirza Ghiyas and his son, Sayyid Muhammad, Persian architects chosen by her. প্র্যাচিভর্স
199. (A) Chemical name of carbolic acid is phenol ($\text{C}_6\text{H}_5\text{OH}$).
200. (A) The Sixty-first Amendment of the Constitution of India, officially known as The Constitution (Sixty-first Amendment) Act, 1989, lowered the voting age of elections to the Lok Sabha and to the Legislative Assemblies of States from 21 years to 18 years. প্র্যাচিভর্স