

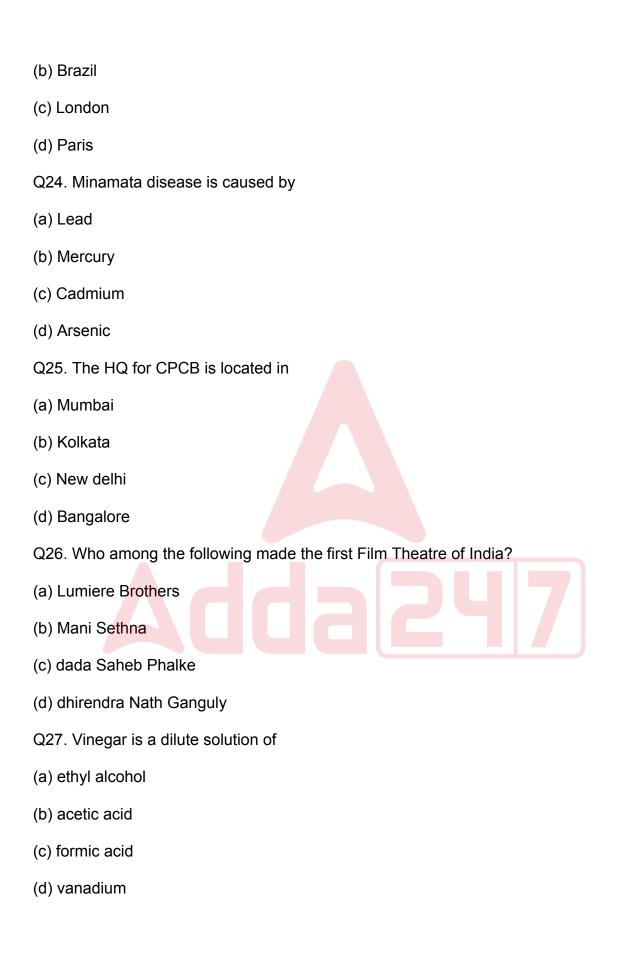
WBCS 2023 MAINS PAPER-IV:

Q1. Powndal is a unit of
(a) mass
(b) weight
(c) momentum
(d) energy
Q2. Who is called the 'Father of Green Revolution' in India?
(a) Verghese Kurien
(b) MS Swaminathan
(c) Dhyan Chand
(d) Vikram Sarabhai
Q3. Which of the following carbohydrates is not a monosaccharide?
(a) Glucose
(b) Fructose
(c) Ribose
(d) Lactose
Q4. Who is called the 'Father of Election Science'?
(a) david Butler
(b) T. N. Seshan
(c) Abul Kalam Azad
(d) Sukumar Sen
Q5. When the power of eye lens increases, the defect of vision is produced. The defect is known as

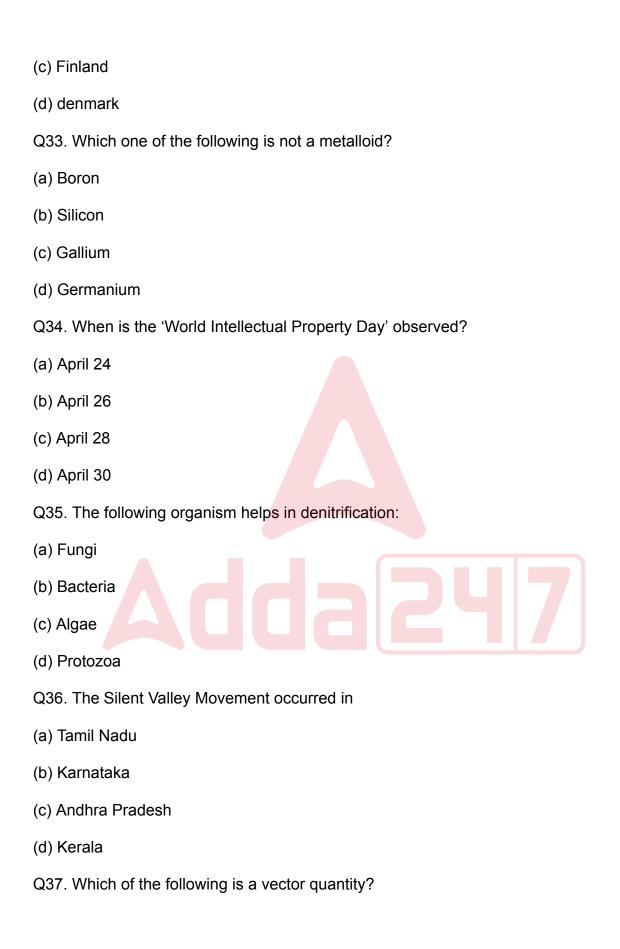
(a) shortsightedness
(b) longsightedness
(c) color blindness
(d) astigmatism
Q6. Which of the following is the most suitable material for making permanent magnet?
(a) Steel
(b) Soft iron
(c) Copper
(d) Nickel
Q7. A magnetic field can be produced by
(a) moving charge.
(b) a changing electric field.
(c) both (a) and (b)
(d) None of the above
Q8. An astronaut in a spaceship see the outer space as
(a) Red
(b) Blue
(c) Indigo
(d) Black
Q9. The National Inland Navigation Institute is situated in which of the following places?
(a) Patna
(b) Balasore
(c) Bangalore

(d) Dehradun
Q10. The first geostationary satellite launched in 1964 was called
(a) ANIK
(b) SYNCOM-3
(c) WESTAR
(d) MOLNIYA
Q11. Graphite is a good conductor of electricity due to
(a) strong electrostatic bonding.
(b) free localized bonds.
(c) free delocalized electrons.
(d) tetrahedral arrangement of particles.
Q12. The year in which NCEPC was set up is
(a) 1970
(b) 1972
(c) 1974
(d) 1980
Q13. Which of the following is a naturally occurring
polymer?
(a) Starch
(b) Teflon
(c) Neoprene
(d) Nylon
Q14. Fullerene is made up of carbon atoms

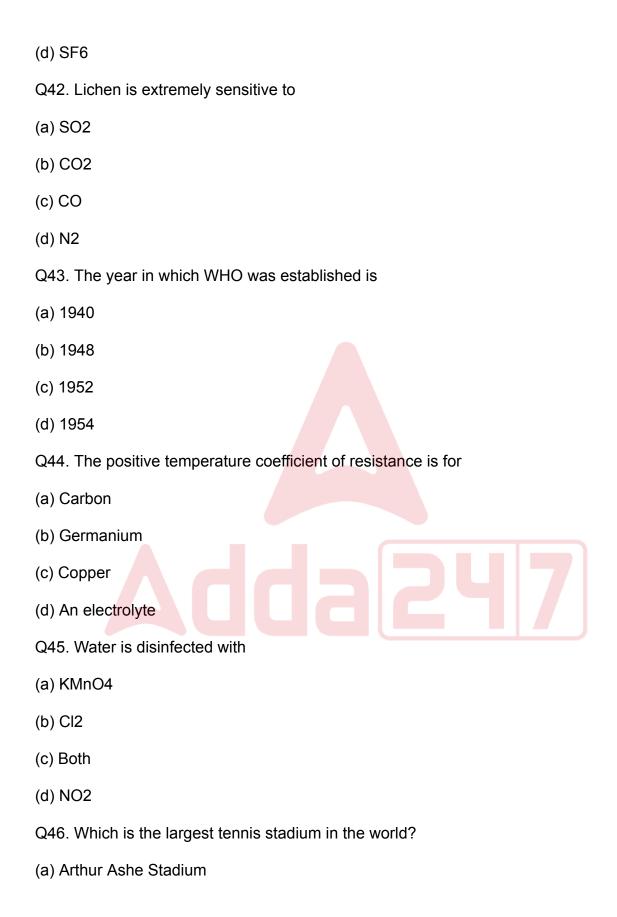
(d) 28th February
Q19. Gahirmatha Sanctuary is the only sanctuary for in Odisha.
(a) Turtles
(b) Crocodiles
(c) Elephants
(d) Deer
Q20. The range of visible spectrum is
(a) 350-650 nm
(b) 380-750 nm
(c) 390-700 nm
(d) 400-800 nm
Q21. The number of United Nations Sustainable development Goals are
(a) 15
(b) 16
(c) 17
(d) 18
Q22. Stone cancer occurs due to
(a) Frost damage
(b) SPM
(c) Acid Rain
(d) Higher VOC level
Q23. The WSSD was held in
(a) Johannesburg



Q28. What was the capital of Vajji Mahajanapada?
(a) Kushinara
(b) Vaishali
(c) Pava
(d) Shuktimati
Q29. The internal energy of gas due to adiabatic expansion will be
(a) decreased
(b) increased
(c) same
(d) dissipated
Q30. Probiotics are
(a) cancer-inducing microbes
(b) safe antibiotics
(c) new kind of food allergens
(d) live microbial food supplement
Q31. The following layer is also called the hot layer of the atmosphere:
(a) Troposphere
(b) Stratosphere
(c) Mesosphere
(d)Thermosphere
Q32. Where is the global seed vault located?
(a) Switzerland
(b) Norway



(a) Current
(b) Current density
(c) Power
(d) Wattless current
Q38. UNDP HeadQuarters is located in
(a) New York
(b) Geneva
(c) London
(d) Paris
Q39. How many biosphere reserves are there in India in 2023?
(a) 17
(b) 18
(c) 19
(d) 20
Q40. Lumbar vertebrae are found in
(a) Abdominal region
(b) Thorax
(c) Neck region
(d) Hip region
Q41. The highest global warming potential is observed in
(a) CO2
(b) NO2
(c) CFC



(b) 02 Arena Stadium (c) Rotterdam Ahoy Stadium (d) Perth Arena Stadium Q47. BOD increases in a waterbody due to the increase of (a) Phytoplankton (b) Zooplankton (c) Sewage (d) Heavy Metals Q48. GATT was introduced in (a) 1947 (b) 1948 (c) 1954 (d) 1960 Q49. The coldest layer of the atmosphere is (a) Troposphere (b) Stratosphere (c) Mesosphere (d) Thermosphere Q50. Toptapani is located in (a) Uttar Pradesh (b) Odisha (c) Madhya Pradesh (d) Jharkhand

Q51. The primary organ affected by COVID-19
(a) Lung
(b) Liver
(c) Kidney
(d) Spleen
Q52. The size of the nanoparticles between nm
(a) 100 to 1000
(b) 0.1 to 10
(c) 1 to 100
(d) 0.01 to 1
Q53. Pablo Picasso was a famous painter from which
country?
(a) USA
(b) France
(c) Spain
(d) UAE
Q54. Minamata Bay is located in
(a) North Korea
(b) China
(c) South Korea
(d) Japan
Q55. The frequency of a simple pendulum is f. What is the frequency change in the energy of the pendulum?
(a) f/2

- (b) f
- (c) 2f
- (d) 4f

Q56. Which is the first Indian documentary to win an Oscar Award?

- (a) Stranger at the Gate
- (b) How do you Measure a Year?
- (c) The Elephant Whisperers
- (d) All that Breathes

Q57. The direction of induced e.m.f. during electromagnetic induction is given by

- (a) Faraday's Law
- (b) Lenz's Law
- (c) Maxwell's Law
- (d) Ampere's Law

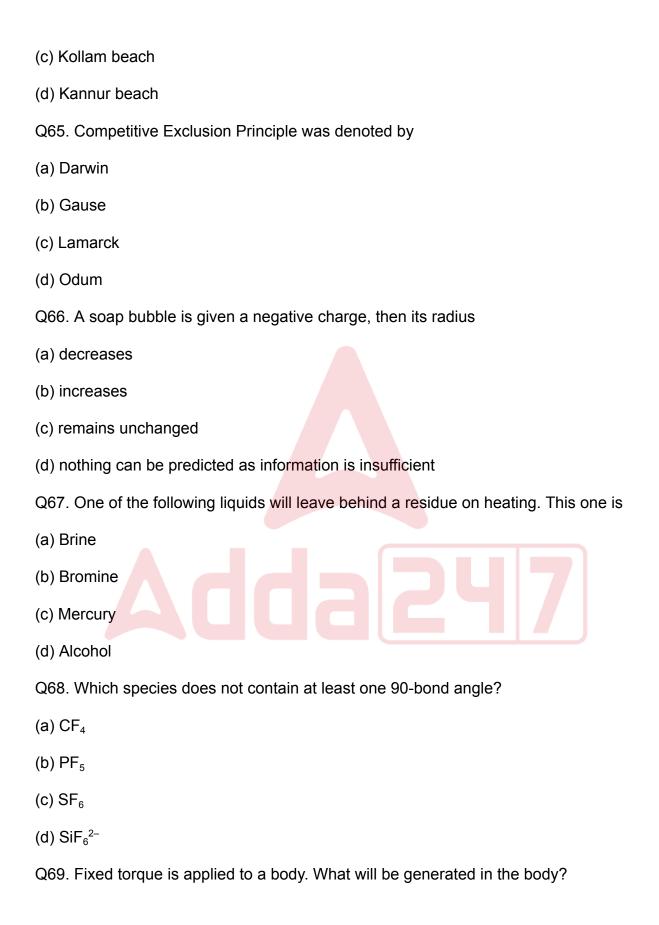
Q58. Who is known as the father of the modern Olympic Games?

- (a) Woodrow Wilson
- (b) Pierre de Coubertin
- (c) Spyridon Samaras
- (d) Herbert Hoove

Q59. What is the order of increasing energy of the orbitals within a single energy level?

- (a) d < s < f < p
- (b) s
- (c) p < s < f < d
- (d) f < d < p < s

Q60. The size of E.Coli bacteria is
(a) 2000 nm.
(b) 200 nm.
(c) 20 nm.
(d) 20 nm.
Q61. There are districts in North Bengal.
(a) 8
(b) 7
(c) 6
(d) 5
Q62. Which institution won the '2021 Indira Gandhi Prize for Peace, disarmament and development'?
(a) Children For You
(b) Pratham
(c) Vanavil
(d) Give India Foundation
Q63. The element that is required for the synthesis of chlorophyll is
(a) Mn
(b) Fe
(c) Mg
(d) Mo
Q64. Which of the following beach is also known as Mahatma Gandhi Beach?
(a) Marari beach
(b) Cherai beach



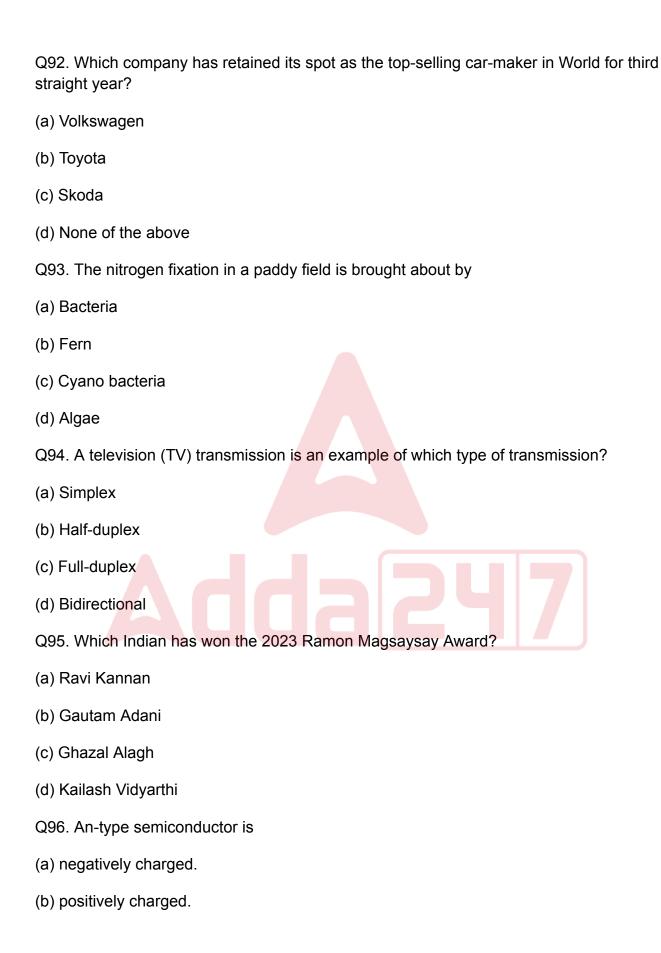
(a) Angular acceleration
(b) Linear acceleration
(c) Angular velocity
(d) Angular displacement
Q70. Cyclotron is a device which is used to
(a) measure the charge
(b) measure the voltage
(c) accelerating electrons
(d) accelerating protons
Q71. The colour of CuS is
(a) Black
(b) Blue
(c) Yellow
(d) Red
Q72. The degrees of freedom of H2 molecule is
(a) 2
(b) 3
(c) 5
(d) 6
Q73. Who among the following made the first fully indigenous silent feature film in India?
(a) Lumiere Brothers
(b) Mani Sethna
(c) Dada Saheb Phalke

(d) dhirendra Nath Ganguly
Q74. Who was recently crowned as 'Miss India 2023'?
(a) Nandini Gupta
(b) Megan Edward
(c) Shreya Poonja
(d) Strela Luwang
Q75. The Valley of Flowers is located in which state of India?
(a) Uttar Pradesh
(b) Uttarakhand
(c) Sikkim
(d) Arunachal Pradesh
Q76. Which transitions are studied by UV spectrometer?
(a) Rotational
(b) Electronic
(c) Nuclear
(d) Vibrational
Q77. Which documentary won the "Best Long Documentary Award" at the South Asian Film Festival of Montreal 2023?
(a) Gujarat
(b) Scam
(c) Bharat Mata Ki
(d) Gauri
Q78. Which movie has been declared the best Indian film of all time by the International Federation of Film Critics (FIPRESCI)?

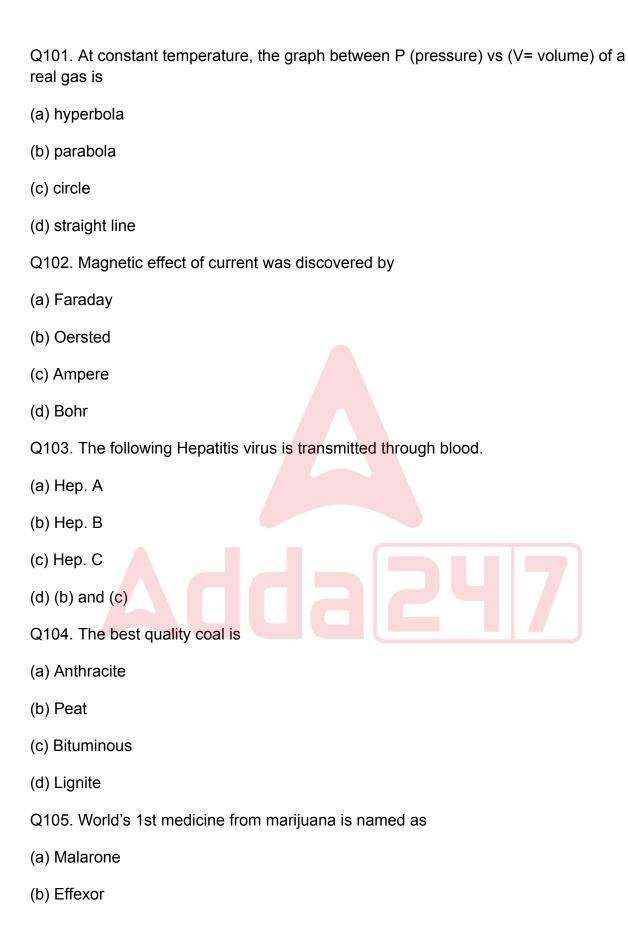
(a) Pather Panchali
(b) Ankur
(c) Anand
(d) Mughal-E-Azam
Q79. Noise in temperature of the Sun compared to Earth is more than K
(a) 1000
(b) 500
(c) 5000
(d) 1,00,000
Q80. 'Country Partnership Framework' is associated with which institution?
(a) World Bank
(b) IMF
(c) WEF
(d) ADB
Q81. Reaction of Lead Oxide (PbO) and hydrogen gas (H2) leads to
(a) reduction of lead.
(b) oxidation of lead.
(c) formation of PbCl2
(d) formation of PbO
Q82. Liberica excelsa, which was seen in the news, belongs to which species?
(a) Tea
(b) Coffee
(c) Rice

(d) Wheat
Q83. The Fukushima Nuclear disaster took place in
(a) 2010
(b) 2011
(c) 2012
(d) 2014
Q84. Netaji Subhas Chandra Bose became the Supreme Commander of the Indian National Army in
(a) 1932
(b) 1935
(c) 1945
(d) 1943
Q85. What was the launch date of Chaiidrayaan-3?
(a) 24 July, 2023
(b) 14 July, 2023
(c) 13 July, 2023
(d) 04 July, 2023
Q86. Vocal Cords occur in
(a) pharynx
(b) larynx
(c) glottis
(d) bronchial tube
Q87. Law of definite proportion is obeyed in
(a) Stoichiometry

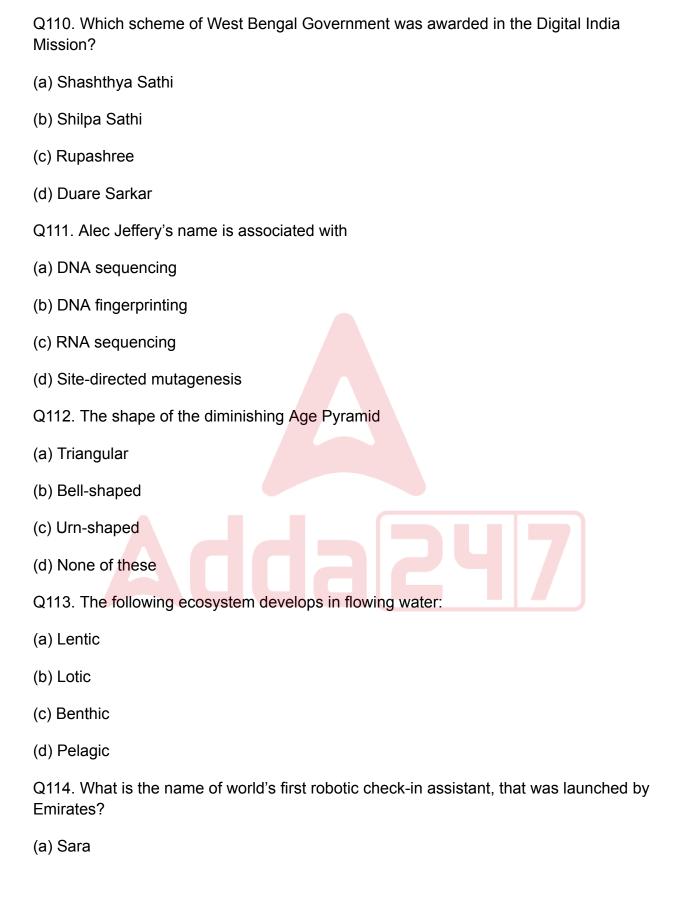
(b) electrometry
(c) photometry
(d) spectrometer
Q88. Triglycerides are broken down to
(a) Fatty acids
(b) Amino acids
(c) Glycerol
(d) Fatty acid and glycerol
Q89. OTEC involves thermal power generation from
(a) Sea
(b) River
(c) Wetland
(d) Lake
Q90. The Paithan (Jayakwadi) Hydro-electric project, completed with the help of Japan, is on the river-
(a) Godavari
(b) Narmada
(c) Cauvery
(d) Ganga
Q91. The down link frequency in the C-band transponder is
(a) 2 GHz
(b) 4 GHz
(c) 14 GHz
(d) 11 GH

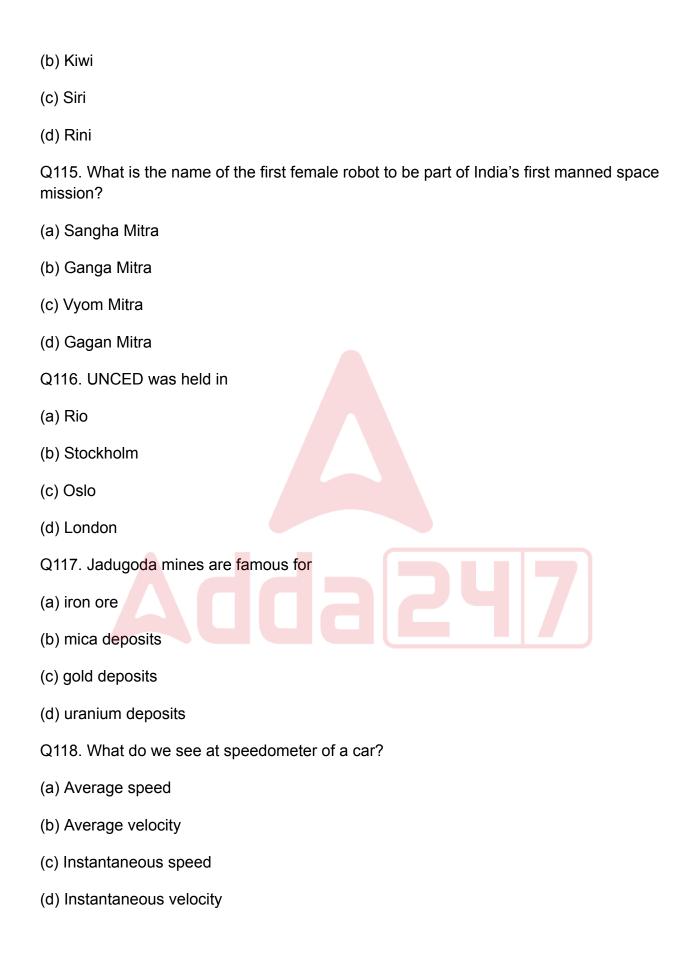


- (c) neutral.
- (d) negatively or positively charged depending upon the amount and substance of impurity.
- Q97. What is the revised prize amount for Nobel Prize Winners, as of 2023?
- (a) 1 million Swedish crowns
- (b) 11 million Swedish crowns
- (c) 21 million Swedish crowns
- (d) 31 million Swedish crowns
- Q98. The usual pH of seawater ranges from
- (a) 7.5-8.5
- (b) 8.5-9.5
- (c) 9.5-10.5
- (d) 10.5-11.5
- Q99. The damage induced by PAN is
- (a) Skin cancer
- (b) Eye irritation
- (c) Both
- (d) Liver cancer
- Q100. The Electrostatic Precipitator is ideally used for the removal of which type of pollution?
- (a) Outdoor Air pollution
- (b) Indoor Air pollution
- (c) Water pollution
- (d) Odour pollution

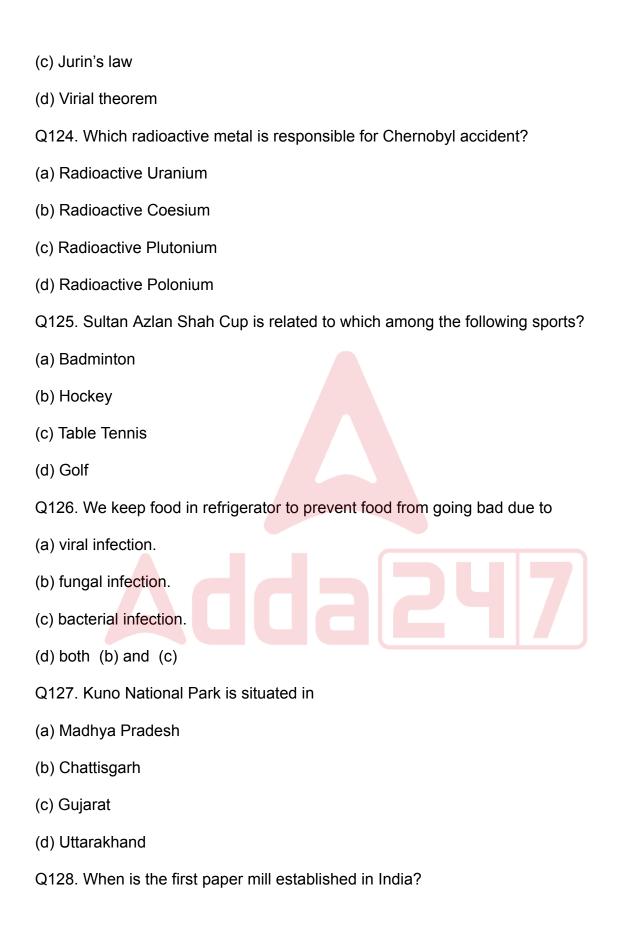


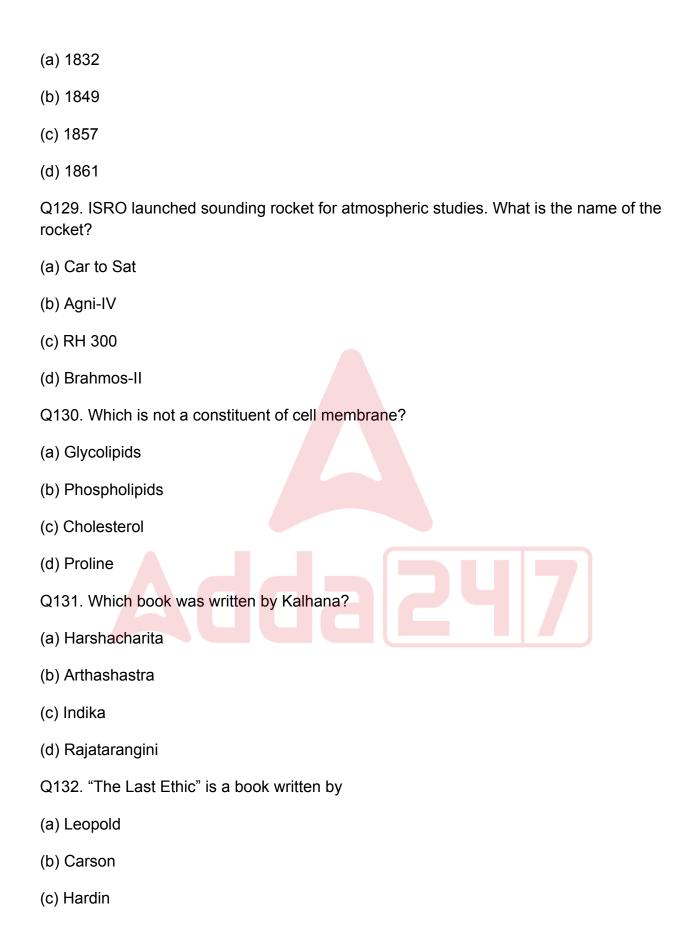
(c) Absinthium
(d) Epidolex
Q106. How many awards were won by West Bengal Government in the Scotch Governance Awards in 2021?
(a) 3
(b) 4
(c) 5
(d) 6
Q107. Which state is the largest producer of bamboo in India?
(a) Assam
(b) Arunachal Pradesh
(c) Chhattisgarh
(d) Karnataka
Q108. Which among the following part of Bombay (now Mumbai) is known as Old Woman's Island?
(a) Parel
(b) Worli
(c) Colaba
(d) Mazgao
Q109. The least albedo is noted in case of
(a) Soil
(b) Snow
(c) Asphalt
(d) Forest





Q119. The main objective(s) of industrial robot is to
(a) minimize the labour requirement.
(b) increase the productivity.
(c) enhance the life of production machines.
(d) All of the above
Q120. Which type of modulation is employed in India for radio transmission?
(a) Amplitude modulation
(b) Frequency modulation
(c) Pulse modulation
(d) Phase modulation
Q121. The latest Biosphere Reserve in India is
(a) Nilgiri
(b) Andaman and Nicobar
(c) Gulf of Mannar
(d) Panna
Q122. In 2006, Nobel Prize for RNA Interference Phenomenon was won on the work carried out on
(a) d. melanogaster
(b) A. thalliana
(c) C. elegans
(d) S. pombe
Q123. Which theorem law can explain the working principle of sprayer?
(a) Stoke's law
(b) Bernoulli's theorem





(d) White
Q133. Pressure within the lungs is called
(a) Inter-pulmonary pressure.
(b) Intra-pulmonary pressure.
(c) Interstitial pressure.
(d) Alveolar pressure.
Q134. Which sport's regional form is "Pehlwani"?
(a) Boxing
(b) Football
(c) Wrestling
(d) Badminton
Q135. 'Baibhav, Saurav and Gaurav' are the civilian awards provided by which state?
(a) Tamil Nadu
(b) Assam
(c) Odisha
(d) Jharkhand
Q136. Which structure has delocalized π electrons?
(a) O3
(b) Co
(c) HCN
(d) CO2
Q137. Which one of the following is more elastic
(a) Copper

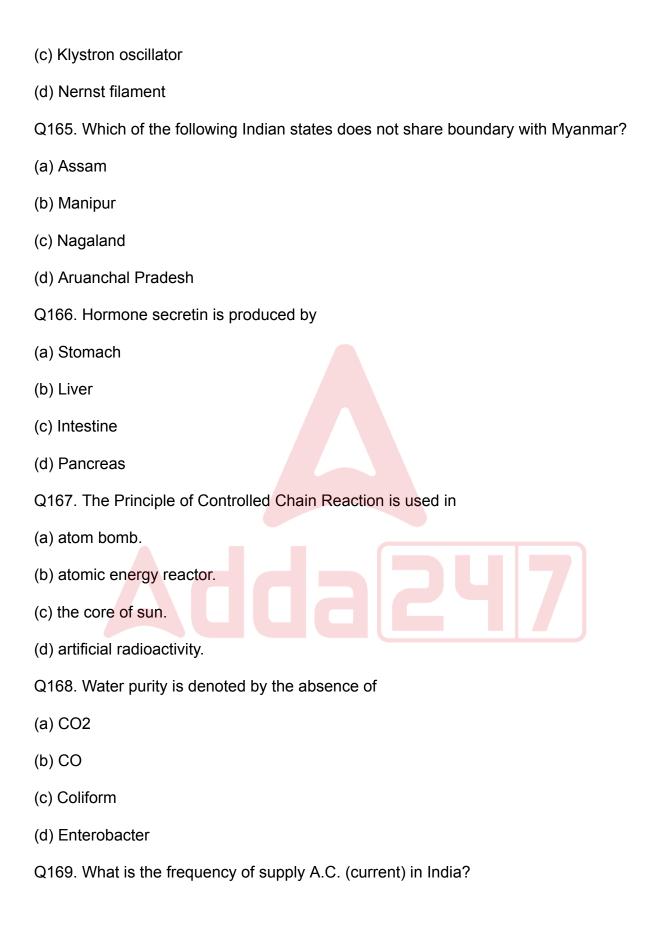
(b) Rubber
(c) Sponze
(d) Steel
Q138. Who launched the Krishi Vikas Yojana
(a) Indian Council for Agricultural Research
(b) National development Council
(c) State Bank of India
(d) State Agricultural Research Board
Q139. In a charged capacitor, the energy resides in
(a) positive charges.
(b) both positive and negative charges.
(c) the field between the plates.
(d) around the edge of the plates.
Q140. Who is the only living Indian to win the Grammy
Award thrice?
(a) A R Rahman
(b) Ricky Kej
(c) Resul Pookutty
(d) Babbu Mann
Q141. The Global Warming Potential of CO2 is
(a) 1
(b) 2
(c) 3

(d) 4
Q142. At which of the following places, noon sun shines exactly overhead twice a year?
(a) Digha
(b) Patna
(c) Kanpur
(d) Delhi
Q143. The following antibiotic is produced by bacteria:
(a) Penicillin
(b) Chloramphenicol
(c) Bacitracin
(d) Streptomycin
Q144. Boron is useful for which of the following organ?
(a) Liver
(b) Kidney
(c) Brain
(d) Bones
Q145. Which of the following states shares the longest boundary with China?
(a) Sikkim
(b) Uttarakhand
(c) Himachal Pradesh
(d) Arunachal Pradesh
Q146. A 220-volt A.C. is more dangerous than 220-volt D.C. because
(a) the A.C. attracts.

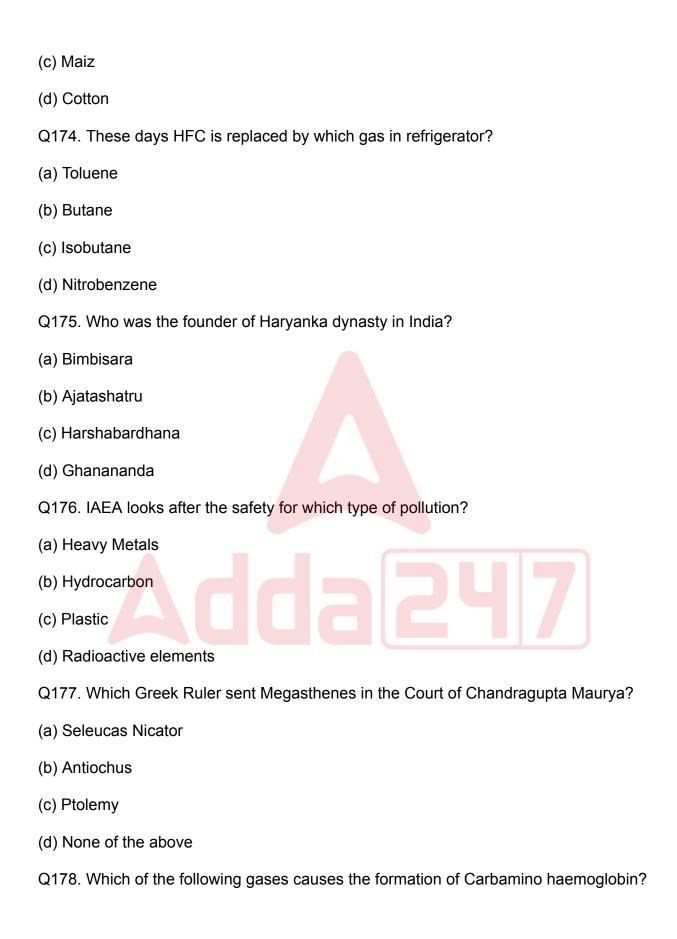
(b) The D.C. repels.
(c) the body offers less resistance to A.C.
(d) peak voltage for A.C. is much larger than 220 volt.
Q147. X-unit =?
(a) 10-15m
(b) 10-12m
(c) 10-10m
(d) 10-13m
Q148. Which one of the following is most likely to exhibit Tyndall effect?
(a) Sugar and water mixture
(b) Potash alum and water mixture
(c) Chalk powder and water mixture
(d) Potassium permanganate and water mixture
Q149. In which year, the first Women's Cricket World Cup was held? (a) 1971 (b) 1972 (c) 1973
(d) 1974
Q150. Which of the following was the first made indigenous, coloured film in India?
(a) Alama Ara
(b) Pather Panchali
(c) Kisan Kanya
(d) Devdas

Q151. 'Big Ben' is the famous clock located in which country?
(a) USA
(b) UK
(c) Australia
(d) France
Q152. The percentage of thermal power generated from coal in India at present is
(a) 50%
(b) 57%
(c) 64%
(d) 74%
Q153. The OTEC plant in India is located in
(a) Andaman and Nicobar Island
(b) Lakshadweep
(c) Gujarat
(d) Odisha
Q154. Which of the following tribes of Uttarakhand is mainly associate themselves with sheep rearing?
(a) Boksha
(b) Bhotia
(c) Raji
(d) Tharu
Q155. Maximum application of animal cell culture technology today is in the production of
(a) Insulin

Q160. deposit of Lithium has been found in which Indian state?
(a) Ladakh
(b) Punjab
(c) Gujarat
(d) Jammu & Kashmir
Q161. The Rowlatt Act was passed in
(a) 1905
(b) 1913
(c) 1919
(d) 1925
Q162. Reindeer moss is actually a member of
(a) Algae
(b) Fungi
(c) Bryophyte
(d) Lichen
Q163. Ecology was coined by
(a) Haeckel
(b) Odum
(c) Tausley
(d) darwin
Q164. What is the source of UV radiation?
(a) Hydrogen gas discharge lamp
(b) RF oscillator



(a) 220 Hz
(b) 60 Hz
(c) 50 Hz
(d) 40 Hz
Q170. Which Indian was conferred the UNEP 'Champions of the Earth' Award in 2022?
(a) Purnima devi Barman
(b) Narendra Modi
(c) K. K. Shailaja
(d) Piyush Goyal
Q171. For which novel Nayantara Sahgal was awarded Sahitya Academy Award for English?
(a) A Time to Be Happy
(b) The Day in Shadow
(c) Rich Like Us
(d) None of the above
Q172. Who is the author of the book "India After Gandhi The History of the World's Largest Democracy"?
(a) Madhav Gandhi
(b) Romila Thapar
(c) Ramachandra Guha
(d) Sujit Mukherjee
Q173. The first transgenic plant was produces
(a) Rice
(b) Tobacco



(a) CO
(b) CO2
(c) NO2
(d) SO2
Q179. The NDRF is under which Ministry?
(a) Ministry of Home Affairs
(b) Ministry of Environment and Forest
(c) Ministry of External Affairs
(d) Ministry of New and Renewable Energy
Q180. Which of the following phenomena is not common to sound and light waves?
(a) Interference
(b) diffraction
(c) Polarisation
(d) reflection
Q181. A non-volatile solid is added to water. Its boiling point will
(a) decrease.
(b) increase.
(c) not change.
(d) not to be predicted.
Q182. When light is refracted, which of the following does not change?
(a) Wavelength
(b) Frequency
(c) Velocity

(d) Amplitude
Q183. How many major forest groups are there in India?
(a) 3
(b) 4
(c) 5
(d) 6
Q184. The state in India having the highest number of wind mill is
(a) Karnataka
(b) Gujarat
(c) Tamil Nadu
(d) Kerala
Q185. The average temperature of the Earth due to the albedo effect is
(a) 10°C
(b) 15°C
(c) 20°C
(d) 25°C
Q186. Which one of the following is a novel by Rabindranath Tagore?
(a) Jagir
(b) Durgeshnandini
(c) Gora
(d) Ganadevata
Q187. What is the India's first nuclear reactor?
(a) RAMBHA

(b) MENAKA
(c) URVASI
(d) APSARA
Q188. What is the name of antibiotics that has been discovered to help in fighting drug-resistant or hard-to-treat bacterial infections?
(a) Philo habdins
(b) Odilor habdins
(c) Oli habdins
(d) Ozor habdins
Q189. What is the amount of methane in cow dung?
(a) 30%
(b) 40%
(c) 50%
(d) 60%
Q190. The use of living microorganism to degrade environmental pollutants is called
(a) microremediation.
(b) nanoremediation.
(c) bioremediation.
(d) All of the above
Q191. Which launcher was used for Chandrayaan-3?
(a) GSLV
(b) LVSM
(c) GSLV-MK 3
(d) PSLV

Q192. Which component is absent in animal cell membrane?
(a) Cholesterol
(b) Ergosterol
(c) Phospholipid
(d) Oligosaccharide
Q193. In which year Asoka invaded Kalinga?
(a) 261 BC
(b) 235 BC
(c) 275 BC
(d) 251 BC
Q194. Artemesin is a drug used in
(a) dengue
(b) Malaria
(c) Typhoid
(d) Pertussis
Q195. Quantity that remains unchanged in a transformer is
(a) Voltage
(b) Current
(c) Frequency
(d) Current density
Q196. The water which is available to plant roots is
(a) Gravitational water.
(b) Chemically combined water.

