

203/2015

1. Panspermia is related with :
(A) Life originates from outer space
(B) Mode of sperm movement
(C) Theory on the evolution of gymnosperms
(D) An epidemic
2. Of the following diseases, which is not caused by water pollution ?
(A) Malaria (B) Dysentery (C) Typhoid (D) Jaundice
3. The permissible level of Ozone in the atmosphere of rural areas as per National Ambient Air quality standards is :
(A) $200 \mu\text{g}/\text{m}^3$ (B) $60 \mu\text{g}/\text{m}^3$ (C) $100 \mu\text{g}/\text{m}^3$ (D) $20 \mu\text{g}/\text{m}^3$
4. Suppose rice plant converts 100 g of CO_2 per day into glucose. How many litres of O_2 at STP are produced ?
(A) 14.02 L O_2 (B) 50.9 L O_2 (C) 66.12 L O_2 (D) 26.44 L O_2
5. More prominent and destructive natural disaster in Kerala :
(A) Earthquake (B) Landslide (C) Flood (D) Lightning
6. As per EPA 1986, the permissible limit of BOD (3 day 27°C) in the effluents discharged into the inland surface waters :
(A) $100 \text{mgO}_2/\text{l}$ (B) $40 \text{mgO}_2/\text{l}$ (C) $10 \text{mgO}_2/\text{l}$ (D) $30 \text{mgO}_2/\text{l}$
7. Who is known as the Patron Saint of Ecology ?
(A) St. Francis of Assissi (B) St. Vincent de Paul
(C) St. Francis Sales (D) St. Marcellinus
8. Of the following, which one is not a category B project as per EIA Notification 2006 :
(A) Ports having < 5 million TPA of cargo handling capacity
(B) Thermal power plant with < 500 MW
(C) Sugar industry with > 5000 tcd cane crushing capacity
(D) Mining project ≥ 50 ha. of mining lease area

9. Which of the following is act as natural sources of methane ?
(i) Buffallo (ii) Biogas plants (iii) Wetlands (iv) Oceans (v) landfills
Choose the correct code :
(A) All are correct (B) (i), (ii), (iii) are correct
(C) (i), (ii), (iii) and (iv) are correct (D) (i), (iii) and (iv) are correct
10. What volume of 12 m HCl is required to prepare 750 mL of 3 m HCl solution ?
(A) 450 mL (B) 190 mL (C) 260 mL (D) 440 mL
11. The members of BTEX group are :
(A) Bromide, Thalium, Ethylbenzene and Xenon
(B) Benzene, Toluene, Ethylbenzene and Xylene
(C) Benzene, Thorium, Ethylacetate and Xylene
(D) Benzene, Toluene, Ethylchloride, Xenon
12. Phycoremediation is the process of :
(A) Waste water treatment using emergent plants
(B) Waste water treatment using algae
(C) Waste water treatment using GM bacteria
(D) Waste water treatment using fungus
13. China clay zone in Kerala is :
(A) between Aluva and Chavakkad
(B) between Aluva and Munnar
(C) between Thiruvananthapuram and Kundara
(D) between Thrissur and Walayar
14. The maximum limit of noise in the commercial area during day time as per CPCB guidelines :
(A) 45 dB (A) Leq (B) 75 dB (A) Leq (C) 65 dB (A) Leq (D) 80 dB (A) Leq
15. The total mass of water on planet earth is :
(A) 1.5×10^{18} tonnes (B) 2.2×10^{13} tonnes
(C) 1.2×10^7 tonnes (D) 24.2×10^{18} tonnes

16. Gaia hypothesis proposed by :
- (A) James Lovelock (B) Charles Darwin
(C) Stephen Hawking (D) Alexander Von Humboldt
17. Appiko movement led by :
- (A) Panduranga Hegde (B) Sunderlal Bahuguna
(C) Chandi Prasad Bhatt (D) Medha Patkar
18. Expansion of OTEC :
- (A) Oil and Thermal Energy Conversion
(B) Oil and Thermal Energy Coefficient
(C) Oceanic Tidal Energy Coefficient
(D) Ocean Thermal Energy Conversion
19. Bioplastic is :
- (A) Polyurethanes (B) Polystyrene
(C) Polyvinyl chloride (D) Polylactic acid
20. Bioluminescence is related with :
- (A) Kelp (B) Dianoflagellates
(C) Monitor lizard (D) Achatina fulica
21. DDT is a :
- (A) Weedicide (B) Insecticide (C) Herbicide (D) Fungicide
22. Name the chemical that contributes to photochemical smog :
- (A) NO_3 (B) NO_2 (C) SO_2 (D) SO_3
23. As per CPCB standards, the quality of outdoor bathing water should be :
- (A) Total Coliforms (MPN/100 ml) shall be 100 or less; pH between 6.5 and 8; Dissolved Oxygen 4 mg/l or more and BOD 10 mg/l or less
(B) Total Coliforms (MPN/100 ml) shall be 200 or less; pH between 4 and 8; Dissolved Oxygen 5 mg/l or more and BOD 20 mg/l or less
(C) Total Coliforms (MPN/100 ml) shall be 500 or less; pH between 6.5 and 8.5; Dissolved Oxygen 5 mg/l or more and BOD mg/l or less
(D) Total Coliforms (MPN/100 ml) shall be 1000 or less; pH between 4 and 8; Dissolved Oxygen 3 mg/l or more and BOD 10 mg/l or less

24. The minimum stack height of Biomedical Incinerators should be :
(A) 100 m above ground (B) 15 m above ground
(C) 30 m above ground (D) 50 m above ground
25. In India, the Ecomarking scheme started in :
(A) 2001 (B) 1986 (C) 2002 (D) 1991
26. Among the following, which standard provides the management of Green House gas emissions.
(A) ISO 14063 (B) ISO 14062 (C) ISO 14001 (D) ISO 14064
27. As per Wild Life Protection Act, King Cobra belongs to the category :
(A) Schedule III (B) Schedule I (C) Schedule IV (D) Schedule II
28. Who was the first scientist who discovered the 'Green House Effect' ?
(A) Joseph Fourier (B) Neils Bohr (C) Marie Curie (D) James Hansen
29. The Ayers Rock (Uluru) in Australia is an example of :
(A) Igneous rock (B) Sedimentary rock
(C) Metamorphic rock (D) Remnants of Meteorite
30. Peroxyacetyl Nitrates (PAN) are formed by the reaction of :
(A) N_2 with CO (B) N_2 with VOCs
(C) NO_2 with VOCs (D) NO_2 with CFCs
31. Geysers are :
(A) The hotwater springs
(B) The jet of boiling water and steam that erupt from earth
(C) Artificial hot water ponds of temperate regions
(D) The natural ponds where cold water and hot water mixes
32. The albedo of charcoal is :
(A) 0.9 (B) 0.04 (C) 0.52 (D) 0.66
33. The Legal provision is to provide for damages to victims of an accident which occurs as a result of handling any hazardous substance :
(A) E waste (Management and Handling) Rules, 2011
(B) Environment Protection Act, 1986
(C) Hazardous Waste (Management, handling, Trans boundary movements) Rules, 2008
(D) Public Liability Insurance Act, 1991

34. A solid material obtained from thermochemical conversion of biomass in an oxygen limited environment is :
(A) Charcoal (B) Activated Carbon (C) Biochar (D) Pyruvate
35. International day for Biodiversity is on :
(A) May 22 (B) April 21 (C) March 22 (D) June 5
36. Plumbism is due to the toxicity of :
(A) Cadmium (Cd) (B) Lead (Pb) (C) Copper (Cu) (D) Nitrate
37. Liana is :
(A) Woody vines (B) An invasive insect
(C) An epidemic of West Africa (D) Genetically modified potato
38. Enthalpy of an exothermic reaction is :
(A) Always negative (B) Always zero
(C) Always positive (D) Either positive or negative
39. Pedogenesis is :
(A) the formation of potholes
(B) study on the formation and science of petroleum
(C) the science and study on the formation of soil
(D) scientific study on the genetic variation among newborn babies
40. The instrument used for the detection of fluoride in water is :
(A) Spectroradiometer (B) Flourimeter
(C) Spectrophotometer (D) Flame photometer
41. The following is not a low cloud :
(A) Stratocumulus (B) Cirrocumulus (C) Cumulonimbus (D) Stratus
42. The instrument used for the detection of pesticides is :
(A) AAS (B) PCR (C) GC-MS (D) ICPMS
43. Among the following, one is not a phytoremediation process :
(A) Phytoextraction (B) Phytostabilization
(C) Phytovolatilization (D) Phytoscreening

44. Energy intensity is measured by the :
- (A) quantity of energy required per unit output or activity
 - (B) quantity of energy used by the activity
 - (C) quantity of energy produced by an action
 - (D) quantity of energy used by unit volume of mass
45. The role of nebuliser in Atomic Absorption Spectroscopy is :
- (A) Converts the liquid sample into small bubbles
 - (B) Heat and push the sample to the detector
 - (C) Converts the liquid sample into a fine spray or aerosol
 - (D) Homogenizing the solutes
46. An example of neuston is :
- (A) fish
 - (B) chironomous larvae
 - (C) water strider
 - (D) copepod
47. The instrument which records the vibration of earth :
- (A) Seismogram
 - (B) Clinometer
 - (C) Seismometer
 - (D) Richter scale
48. The point in the earth where the seismic waves originate :
- (A) Seismic area
 - (B) Hypocentre
 - (C) Epicentre
 - (D) Fault
49. The set of biotic and abiotic conditions in which a species is able to persist and maintain stable population sizes is known as :
- (A) Ecological niche
 - (B) Habitat
 - (C) Community
 - (D) Ecotone
50. In oceans, down welling occurs in the areas of :
- (A) High current and salinity
 - (B) Surface convergence
 - (C) High offshore winds
 - (D) Surface divergence
51. The following is not an application of HPLC :
- (A) Detection of vitamin D levels in urine
 - (B) Estimation of bioethanol production
 - (C) Detection of heavy metals
 - (D) Drug detection in water samples
52. Third generation biofuels are derived from :
- (A) Pongamia
 - (B) Jatropha
 - (C) Animal fat
 - (D) Algae

53. In a green home, the tangible benefit of energy saving is :
 (A) 25 - 40% (B) 40 - 60% (C) 10 - 20% (D) 20 - 30%
54. As per Greenpeace report, the toxic hotspot of Kerala is :
 (A) Brahmapuram Dumping Yard (B) Laloor Waste dumping site
 (C) Eloor - Edayar Industrial Region (D) Mavoor Rayons
55. Select the false statement on water property :
 (A) Increased salinity; increased density
 (B) Increased temperature; increased salinity
 (C) High evaporation; high salinity
 (D) Increased temperature; decreased density
56. The power flow of an organism per unit area or of a trophic level is :
 (A) Productivity (B) Biomass
 (C) Gross energy (D) Trophic dynamics
57. Name the National Park in Kerala established mainly for the conservation of Nilgiri Marten :
 (A) Anamudi Shola NP (B) Mathikettan Shola NP
 (C) Pampadum Shola NP (D) Eravikulam NP
58. The three R's in environmental protection :
 (A) Reduce, Recycle and Remediate
 (B) Reproduce, Reduce and Recycle
 (C) Remediate, Reuse and Rejuvenate
 (D) Reduce, Recycle and Reuse
59. Who inaugurated the Silent Valley National Park ?
 (A) Rajiv Gandhi (B) Indira Gandhi (C) Morarji Desai (D) K. Karunakaran
60. The main gaseous pollutant in the coastal and brackish water areas of Kerala is :
 (A) Sulphur dioxide (B) Carbon monoxide
 (C) Hydrogen sulphide (D) Carbon dioxide

61. The bioluminescence phenomenon at Alappuzha coast during July 2015 was due to :
(A) *Chlorella vulgaris* (B) *Noctiluca scintillans*
(C) *Photobacterium phosphoreum* (D) *Mesocyclops*
62. Ramsar Convention is related with :
(A) Wetlands (B) Mountain ecosystems
(C) Marine pollution (D) Radioactive waste
63. King Cobra belongs to the category :
(A) Vulnerable (B) Endangered (C) Near threatened (D) Least concern
64. The specialised freshwater wetlands in the forest of Kerala are known as :
(A) Potholes (B) Ecotone
(C) Reed valley (D) *Myristica* swamps
65. Which of the following is an example of in situ conservation ?
(A) Seed bank (B) Gene bank
(C) Wild life sanctuary (D) Zoos
66. Permanent Hardness of drinking water is due to the presence of :
(A) Carbonates and bicarbonates
(B) Nitrate ions
(C) Calcium and magnesium ions
(D) Potassium and phosphate
67. In which layer of the atmosphere, the auroras (Northern lights) occur ?
(A) Stratosphere (B) Thermosphere (C) Troposphere (D) Exosphere
68. The dominant vegetation of Chinnar wild life sanctuary is :
(A) Southern moist deciduous forest
(B) Southern wet evergreen forest
(C) Southern tropical dry deciduous forest
(D) Southern tropical thorn forest

69. Bhopal gas tragedy was due to :
 (A) Sulphur dioxide (B) Carbon monoxide
 (C) Methyl cyanide (D) Methyl isocyanate
70. Which one of the following is the 'east flowing' river in Kerala ?
 (A) Bhavani (B) Periyar (C) Chalakkudy (D) Kallada
71. The wind system in the tropical regions are known as :
 (A) Cyclones (B) Trade winds (C) Westerlies (D) Hurricanes
72. The main cause of lung diseases is :
 (A) Carbon dioxide (B) Ozone (C) Nitrous oxide (D) RSPM
73. Select the false statement :
 (A) Rainwater contains pollens (B) Rainwater contains dust
 (C) Rainwater is acidic in nature (D) Rainwater contains essential minerals
74. Select the false statement :
 (A) The organic matter in the soil increases the Cation Exchange Capacity (CEC)
 (B) If a soil have higher CEC, it is highly fertile
 (C) If a soil have higher CEC, it is less fertile
 (D) CEC is measured in milliequivalents per 100 grams of soil
75. The primitive and last remaining hunter and gatherer tribal community of Kerala is :
 (A) Mala Araya (B) Kuruma (C) Kurichiar (D) Cholanaikkans
76. The first National Park in India :
 (A) Jim Corbett NP (B) Silent Valley NP (C) Kaziranga NP (D) Bandipur NP
77. Following is an example of Zoonotic epidemic :
 (A) SARS (B) Malaria
 (C) Japanese encephalitis (D) Jaundice
78. In a waste water, the BOD_5/COD_{cr} ratio is > 0.6 , which treatment is fairly cost effective :
 (A) Addition of alum (B) Trickling filters
 (C) Phytoremediation (D) Oxidation ponds

79. Modified Jacob and Hochheiser method is used for the measurement of :
- (A) Sulphur dioxide in air (B) Nitrate in water
(C) Phosphate in water (D) Nitrogen dioxide in air
80. The Chairman of WGEEP is :
- (A) Madhav Gadgil (B) Kasturirangan
(C) V. S. Vijayan (D) Oommen V. Oommen
81. An eminent Social Reformer of Kerala known as *Vidyadhiraja* :
- (A) Sree Narayana Guru (B) Chattampi Swamikal
(C) Vagbhadanandan (D) Vakkam Abdul Khadar Maulavi
82. The person who was known as "*Bharat Kesari*" :
- (A) Bala Gangadhara Tilak (B) Veluthampi Dalwa
(C) Mannathu Padmanabhan (D) Dr. Palpu
83. Who was the volunteer captain of Guruvayur Satyagraha ?
- (A) E.M.S. Namboothiripad (B) G.P. Pillai
(C) E.K. Nayanar (D) A.K. Gopalan
84. Which one was considered the mouth piece of Abstention Movement ?
- (A) Al Ameen (B) Kerala Kesari
(C) Swadeshabhimani (D) Malayala Manorama
85. *Unni Namboothiri* is the publication of :
- (A) Nayar Service Society (B) Sreenarayana Dharma Paripalana Yogam
(C) Sadu Paripalana Sangam (D) Yogakshema Sabha
86. The Temple Entry Proclamation was on :
- (A) 12th November 1936 (B) 12th November 1932
(C) 12th January 1950 (D) 1st November 1951
87. "*Muslim Janavum Vidhyabyasavum*" a notable work of :
- (A) Makthi Thangal (B) Dr. C.K. Kareem
(C) Veliyamkode Umer Khasi (D) Vakkam Abdul Khadar Maulavi