Q001: In which district is Haldi Ghati located?
(A) Rajsamand (B) Chittorgarh (C) Kota (D) Pratapgarh

Q002: What is the major disadvantage of incineration?
(A) It requires microorganisms (B) Heat generation
(C) Large volume reduction of the waste (D) It causes several air pollution issues

Q003: If in a particulate control system $PM_{2.5}$ to PM_{10} ratio jumped from 0.5 to 0.7, it implies that:
(A) A larger fraction of coarse particles is removed
(B) The ratio is not suggestive of fraction removed
(C) Both PM_{10} and $PM_{2.5}$ are removed equally effectively
(D) A larger fraction of fine particles is removed

Q004: Which of the following pollutants is the major contributor to photochemical smog?
(A) Nitrogen dioxide (B) Ozone (C) Hydroperoxides (D) Peroxynitrates

Q005: Which Indian Tiger reserve has won the UNDP's TX2 global award for doubling tiger population?
(A) Corbett Tiger Reserve (B) Pilibhit Tiger Reserve
(C) Kanha Tiger Reserve (D) Bandipur Tiger Reserve

Q006: Which of the following statements is ***false***?
(A) Water evaporates when air is cooled to its dew point.
(B) Adding water vapor to the air, increases the dew point temperature
(C) A high value of relative humidity implies a low temperature-dew point spread.
(D) Frost is likely if the air is cooled to its (below freezing) dew point.

Q007: How many individuals have won the Nobel Prize more than once?
(A) 2 (B) 9 (C) 4 (D) 7

Q008: If biomass is described by the chemical formula $C_5H_7NO_2$, what will be the units of oxygen required to oxidise one unit of biomass?
(A) 14.0 (B) 1.42 (C) 3.53 (D) 3.2

Q009: Which of the following is the nodal agency in the country for the United Nations Environment Programme (UNEP)?
(A) National Board for Wildlife, Afforestation and Eco-Development
(B) Ministry of Environment Protection and Conservation
(C) Ministry of Environment, Forest and Climate Change
(D) Central Pollution Control Board

Q010: Which of the following statement(s) is/are correct regarding National Green Tribunal (NGT)?

I. The Chairperson of the NGT is a retired Judge of the Supreme Court, head quartered in New Delhi.
II. NGT Act 2010 draws inspiration from the India's constitutional provision of Article 21 - Protection of life and personal liberty, which assures the citizens of India the right to a healthy environment.
III. The NGT is mandated to make and endeavor for disposal of applications or appeals finally within 3 months of filing of the same.

(A) Only II and III (B) All I, II, and III (C) Only I and III (D) Only I and II

Q011: Which is the major anthropogenic source for sulphur dioxide?
(A) Volcanic eruptions (B) Burning of petrol
(C) Sewage treatment process (D) Coal and crude oil combustion

Q012: What was the theme of World Environment Day 2020?
(A) Time for Nature (B) Beat Plastic Pollution
(C) Beat Air Pollution (D) Go Wild for Life

Q013: Which of the following river flows its entire course within the state of Rajasthan?
(A) Kali Sindh (B) Luni (C) Parbati (D) Banas

Q014: What is the inertial method used to measure size of aerosol particles?
(A) Particle acceleration method (B) Electrical mobility method
(C) Laser based sensor method (D) Light scattering method

Q015: In which year was Ajmer merged into Rajasthan?
(A) 1947 (B) 1950 (C) 1956 (D) 1960

Q016: Which state is considered as the cleanest state as per the Swachh Survekshan of 2020?
(A) Haryana (B) Chhattisgarh (C) Kerala (D) Maharashtra

Q017: The 24-hour National Ambient Air Quality Standard for $PM_{2.5}$ in India is (in $\mu gm/m^3$):
(A) 75 (B) 20 (C) 50 (D) 60

Q018: Which of the following wastewater treatment technologies can achieve effluent BOD less than 5 mg/L?
(A) Activated Sludge Process (B) Anaerobic Upflow Sludge Blanket
(C) Membrane Bio-Rector (D) Trickling Filter

Q019: Type 3 (polyvinyl chloride) plastic is commonly found in
(A) Food packaging (B) Soft drinks and water bottles
(C) Shopping bags (D) Irrigation pipes

Q020: A city with tropical and humid weather produces waste with high calorific value. Which of the following options is best suited for the city?
(A) Composting (B) Biomethanation (C) Waste to energy (D) Landfilling

Q021: In India, which informal sector plays crucial rule in following solid waste management functions?
(A) Recycling (B) Segregation (C) Collection (D) Recovering

Q022: The activated sludge process consists of returning a fraction of the
(A) Sludge leaving the primary clarifier (B) Effluent leaving primary clarifier
(C) Effluent leaving secondary clarifier (D) Sludge leaving the secondary clarifier

Q023: Which 'Indian American citizen' has been chosen by the Time Magazine as 'Kid of the year 2020'?
(A) Megha Sharma (B) Geetanjali Rao (C) Sunita Williams (D) Kamala Harris

Q024: As per the Plastic Waste Management Rules 2016; the minimum thickness of plastic carry bags has been increased from 40 microns to:
(A) 70 microns (B) 60 microns (C) 50 microns (D) 80 microns

Q025: Global warming means an increase in the average temperature of?
(A) The earth's surface (B) The earth's inner core
(C) The ocean water (D) The sun

Q026: Which is the competent authority for notifying the EIA notification in India?
(A) Law Ministry (B) MoEF&CC (C) State Government (D) CPCB

Q027: What is the best way to reduce the noise pollution around houses?
(A) Built a noise resistant shield across the house (B) Use of ear buds to reduce the noise
(C) Planting trees around houses (D) Throwing all noisy machines

Q028: As per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016; the occupiers of facilities may store the hazardous and other wastes for a period ***not*** exceeding:
(A) 90 days (B) 80 days (C) 100 days (D) 120 days

Q029: Which model is suitable for assessing the impact of air pollutants on the environment?
(A) CAQMS (B) NAAQM (C) NAMP (D) AERMOD

Q030: Peroxyacyl nitrate (PAN), a pollutant in atmosphere
(A) Decomposes into poly aromatic hydrocarbon
(B) Decomposes into peroxyethanoyl radicals and nitrogen dioxide
(C) Decomposes into peroxybenzoyl nitrate (PBN)
(D) Decomposes into nitric acid

Q031: Chlorides are estimated by titration with a standard silver nitrate solution by using _____ as an indicator.
(A) Potassium dichromate (B) Potassium chromate
(C) Potassium manganate (D) Potassium chloride

Q032: Sludge retention time of conventional activated sludge process is
(A) 50-60 days (B) 20-30 days (C) 1-2 days (D) 5-15 days

Q033: Which one of the following is ***not*** a fossil fuel?
(A) Uranium (B) Petrol (C) Coal (D) Natural gas

Q034: Who became the first bowler in Cricket to take 500 T20 wickets?
(A) Md. Shami (B) Andre Russel (C) Dwayne Bravo (D) Ishant Sharma

Q035: A coastal city produces municipal solid waste (MSW) with high moisture content, high organic materials, low calorific value and low inorganic materials. The most effective and sustainable option for MSW management in that city is
(A) Composting (B) Incineration (C) Dumping in Sea (D) Landfill

Q036: What does the abbreviation NDIR stand for, in the category of spectrometric analyses?
(A) Non-Destructive Integrated Restoration (B) Non-Dispersive Infrared
(C) Neo-Dispersive Integrated Radiation (D) Neo-Destructive Integrated Radiation

Q037: Which of the following cations does ***not*** cause hardness?
(A) Ca^{2+} (B) Sr^{2+} (C) Mn^{2+} (D) Na^{+}

Q038: As per the biomedical waste (Management and Handling Rules, 2016), the human and animal anatomical waste should be treated and disposed using which method?
(A) Incineration/deep burial (B) Autoclaving
(C) Microwaving (D) Chemical treatment

Q039: Gulf of Mannar biosphere reserve is located in
(A) West Bengal (B) UP (C) Tamil Nadu (D) Maharashtra

Q040: In COD test of sewage, organic matter is oxidized by $K_2Cr_2O_7$ in the presence of
(A) HCL (B) Hydrofluoric acid (HF)
(C) H_2SO_4 (D) HNO_3

Q041: Milk, detergent and carry bags/containers come under which category of plastic?
(A) PVC (B) PET (C) LDPE (D) HDPE

Q042: As per the 'State of India's Birds Report 2020', which bird species showed a big increase in population?
(A) Curlew Sandpiper (B) Indian Vulture
(C) Great Indian Bustard (D) Indian Peacock

Q043: Source segregation and storage of the waste generated in separate streams is the responsibility of
(A) Local civic authorities
(B) Waste pickers and waste collectors
(C) Individual waste generator
(D) Operators of the solid waste processing and treatment facilities

Q044: Revised National Ambient Air Quality Standards (MoEF&CC notification G.S.R 826(E), dated 16.11.2009) specify two methods for the analysis of Nitrogen Dioxide (NO_2) µg/m^3. One of them is known as Modified Jacobs-Hochheiser (Na-Arsenite) method. What is the other method specified in NAAQS-2009 standards?
(A) Gas Liquid Chromatography (B) Atomic Absorption Spectroscopy
(C) Chemiluminescence (D) Ion chromatography

Q045: In Environmental Impact Assessment, the full form of CEQ is
(A) Centre for Environmental Quality (B) Center for Educational Quality
(C) Council on Educational Quality (D) Council on Environmental Quality

Q046: Balance the following chemical oxidation-reduction reaction:
$a\ Cl^- + b\ Cr_2O_7^{2-} + c\ H^+ \rightarrow d\ Cl_2 + e\ Cr^{3+} + f\ H_2O$
(A) a=4, b=3, c=12, d=2, e=3, f=6 (B) a=6, b=2, c=16, d=6, e=2, f=8
(C) a=6, b=1, c=14, d=3, e=2, f=7 (D) a=2, b=3, c=12, d=1, e=6, f=6

Q047: What is the main source of vehicular noise?
(A) Fuel engine
(B) Movement of the vehicle's tyres on the pavement
(C) High speed
(D) Low pressure

Q048: Pressure changes:
(A) More rapidly in the horizontal direction than in the vertical
(B) More rapidly in the vertical direction over land than over the ocean
(C) At the same rate in the horizontal and vertical directions
(D) More rapidly in the vertical direction than in the horizontal

Q049: The plume rise mainly has the following two components:
(A) Wind drift and momentum buoyancy (B) Chemical reactivity and thermal buoyancy
(C) Density difference and thermal buoyancy (D) Thermal and momentum buoyancy

Q050: In a conventional water treatment plant, which type of filter is commonly provided?
(A) Activated carbon filter (B) Rapid sand gravity filter
(C) Pressure sand filter (D) Slow sand filter

Q051: What could be inferred from the following samples concerning the relative ease of biodegradability, Sample A (BOD_5 / COD = 24 / 30) and Sample B (BOD_5 / COD = 10 / 50)?
(A) Sample A is easily biodegradable (B) Sample B is easily biodegradable
(C) Both are non-biodegradable (D) Both samples are easily biodegraded

Q052: Who did Rana Sanga defeat in the battle of Khatoli?
(A) Sikandar Lodhi (B) Akbar (C) Babur (D) Ibrahim Lodhi

Q053: How does atmospheric pressure vary with increase in altitude?
(A) It increases till stratosphere and then starts decreasing exponentially
(B) It decreases linearly
(C) It decreases exponentially
(D) It increases linearly

Q054: Diameter of pollen grains in the air range between
(A) 1-10 µm (B) 10-100 µm (C) 0.1-1.0 µm (D) 0.001-0.1 µm

Q055: National Board for Wildlife is a "Statutory Organization" constituted under the Wildlife Protection Act, 1972. Who among the following chairs the National Board for Wildlife (NBWL) in India?
(A) Minister of Environment, Forest and Climate Change
(B) Prime Minister
(C) A renowned environmentalist or academician of the country
(D) Minister of Environment and Forest

Q056: What will be the value of total alkalinity (mg/L), if a 50 mL of sample required 5 mL N/50 sulfuric acid to reach the phenolphthalein end point, and total of 15 mL to reach the methyl orange end point?
(A) 300 (B) 250 (C) 75 (D) 100

Q057: Which method is used to measure the color of water?
(A) Hydrometer analysis (B) Tintometer method
(C) Chromatography (D) Gravimetric analysis

Q058: For domestic wastewater 5-day BOD value represents ____ percent of the total BOD
(A) 10-20 (B) 100 (C) 70-80 (D) 30-40

Q059: Of the following technical options in plastic waste reuse/recycle, which one has witnessed more success in India?
(A) Bitumen Roads (B) Incineration (C) Pyrolysis (D) Landfilling

Q060: Which one of the following is applicable for controlling transboundary movement of Hazardous Wastes?
(A) Kyoto Treaty on Import and Export of Hazardous Wastes and Substance
(B) Basel Convention on Transboundary Movement of Hazardous Wastes
(C) Rotterdam Protocol on Transboundary Movement of Hazardous Wastes
(D) Stockholm Treaty on Import and Export of Hazardous Wastes and Substance

Q061: Which of the following statements is true?
(A) Troposphere is thicker at the equator than at the poles
(B) Troposphere contains the ozone layer
(C) Troposphere is equally thick across different parts of the world
(D) Troposphere is thinner at the equator than at the poles

Q062: For effective composting of municipal solid waste, initial C/N ratio of the waste should be
(A) Less than 18 (B) Between 26 to 32 (C) Equal to 47 (D) More than 42

Q063: When light is passed through a suspension, its intensity decreases due to
(A) Both diffraction and absorption (B) Absorption only
(C) Both scattering and diffraction (D) Both scattering and absorption

Q064: What is a high pressure area with sinking air also known as?
(A) Cyclone (B) Eddy zone (C) Anti-cyclone (D) Richardson zone

Q065: The Forest (Conservation) Act was enacted in the year
(A) 1986 (B) 1927 (C) 1974 (D) 1980

Q066: As per BIS 10500:2012, the limit of nitrates in drinking water as nitrate (as NO_3) is 45 mg/L. What will be the value if nitrate is reported as Nitrate-N?
(A) 45 mg/L (B) 10 mg/L (C) 15 mg/L (D) 4.5 mg/L

Q067: What is the next number in the sequence 4,6,8,9,12,12,16,15,20,___?
(A) 21 (B) 18 (C) 5 (D) 33

Q068: I am three times as old as my son. Five years later I shall be two and a half times as old as my son. What is my age?
(A) 33 (B) 54 (C) 27 (D) 45

Q069: Ajay Thakur received Padma Shree in 2019 for
(A) Kho Kho (B) Table Tennis (C) Kabaddi (D) Basket Ball

Q070: What would have been the average temperature of Earth without greenhouse gases (in degree Celsius)?
(A) -19 (B) -9 (C) 0 (D) -7

Q071: Nitrification is conversion of ___ to ____
(A) Ammonia, Nitrogen Gas (B) Ammonia, Nitrate
(C) Nitrate, Nitrogen Gas (D) Nitrite, Ammonia

Q072: The ideal gas law is stated; PV=nRT. For n equal to 0.5, temperature of 273 Kelvin and pressure of 1 atm, the volume occupied by a gas is:
(A) 22.4 liter (B) 44.8 liter (C) 11.2 liter (D) 0.224 liter

Q073: What is the technical term for combating adverse impacts of the project?
(A) Documentation (B) Prediction (C) Mitigation (D) Evaluation

Q074: In which year the EIA notification was published for the first time in India?
(A) 1981 (B) 1978 (C) 1974 (D) 1994

Q075: For yellow color, AQI ranges between
(A) 151-200 (B) 0-50 (C) 51-100 (D) 201-300

Q076: Plant protection code is a set of guidelines for regulating chemical inputs in:
(A) Fruits (B) Vegetables (C) Cereals (D) Tea

Q077: What is the major objection to the use of municipal sewage sludge as a fertilizer?
(A) Heavy metals (B) Organic content (C) Potash (D) Phosphates

Q078: The Michaelis Menten kinetic equation, $V = (V_{max}[S]) / (K_m + [S])$, describes the enzyme kinetics involving a substrate, S. V is the rate of enzyme reaction (velocity), V_{max} is maximum rate of reaction, and K_m is half saturation coefficient. Which of the following pairs correctly represents the order of equation respectively, when the substrate concentration >> K_m and when substrate concentration is << K_m?
(A) 1, 0 (B) 0, 1 (C) 1, 1 (D) 0, 0

Q079: The National Green Tribunal has directed which state to prepare an action plan for 14 proposed elephant corridors?
(A) Maharashtra (B) Odisha (C) Kerala (D) Tamil Nadu

Q080: Which Indian minister delivered keynote address in Sri Lanka Economic Summit (SLES) 2020?
(A) S Jai Shankar (B) Nitin Gadkari (C) Piyush Goyal (D) Nirmala Sitharaman

Q081: On 20th January 2021, Joe Biden took oath as _____ President of the United States of America.
(A) 42nd (B) 46th (C) 47th (D) 45th

Q082: As per CPCB, the biomedical waste, if any, generated from quarantine centers/camps, should be collected separately in ___ bags.
(A) Black (B) Blue (C) Yellow (D) Red

Q083: For estimating BOD of a sewage sample in laboratory, 1% solution of the sewage sample was prepared, which was incubated for 5 days at 20°C. After 5 days, if reduction in the dissolved oxygen was 3 mg/L, what is the value of BOD of the sample?
(A) 500 mg/L (B) 150 mg/L (C) 200 mg/L (D) 300 mg/L

Q084: The Total Dissolved Solids (TDS) ***cannot*** be removed by which of the following methods?
(A) Distillation (B) Reverse Osmosis (C) Filtration (D) Ion Exchange

Q085: The lowest sound level which is considered as hazardous noise pollution is:
(A) 30 dB (B) 50 dB (C) 20 dB (D) 80 dB

Q086: As per the EIA notification, 2006, the full form of SEAC is
(A) State Environmental and Academic Council
(B) State Environmental Affairs Council
(C) State Education and Academic Council
(D) State level Environmental Appraisal Committee

Q087: Which of the following statements is ***wrong*** regarding permanent hardness?
(A) It cannot be removed by boiling
(B) It is also called carbonate hardness
(C) It is due to the presence of sulfates, chlorides and nitrates of calcium and magnesium
(D) It requires special methods of water softening to get removed

Q088: Which of the following pollutants is responsible for acid rain?
(A) Carbon monoxide (B) Oxides of Sulphur (C) Particulates (D) Methane

Q089: The cations and anions must balance in any sample of water. Common ions with their approximate equivalent weights are Ca^{2+} [20], Mg^{2+} [24], Na^{+} [23], K^{+} [39] and HCO_3^{-} [61], SO_4^{2-} [48], Cl^{-} [35], NO_3^{-} [62]. Criterion for acceptance of correctness of analysis is that % difference in ion sums should not exceed 10%. If the analysis shows the concentration of various ions as, calcium=70 mg/L, magnesium=18 mg/L, sodium=23.0 mg/L, potassium=3.9 mg/L, bicarbonate=183.0 mg/L, sulfate=72.0 mg/L, chloride=35.0 mg/L, nitrate=6.2 mg/L then which of the following can be said about correctness of analysis?
(A) Accept as correct analysis (B) Accept cations and reanalyse anions
(C) Reanalyse both cations and anions (D) Accept anions and reanalyse cations

Q090: Which of the following is included in 3Ts of combustion?
(A) Turbulence, Technology, Time (B) Temperature, Time, Turbulence
(C) Torque, Turbulence, Time (D) Torque, Temperature, Time

Q091: Which of the following should be ***avoided*** in hilly areas?
(A) The material segregation and recovery facility
(B) Construction of engineered municipal solid waste disposal landfill
(C) Transfer station to collect residual waste from the processing facility and inert waste
(D) Composting facility for biodegradable waste

Q092: Air pollution from automobiles can be controlled by fitting:
(A) Electrostatic precipitator (B) Wet scrubber
(C) Cyclone separator (D) Catalytic converter

Q093: Which of the following is ***not*** used in control of air pollution?
(A) Settling chamber (B) ETP (C) Cyclone (D) ESP

Q094: If an industry discharges 4000 m^3/day wastewater with BOD_5 of 800 mg/L into the municipal sewer having a sewage flow rate of 20 MLD with average BOD_5 of 200 mg/L, then what will be the BOD (mg/L) of mixed effluent?
(A) 1000 (B) 500 (C) 600 (D) 300

Q095: Which one of the following is an appropriate leachate management system for a compost plant used for horticulture waste?
(A) It should be concentrated using multi effect evaporators before disposal
(B) It should be used for irrigation purpose
(C) It should be re-circulated in the compost plant for moisture management
(D) It should be disposed of in nearby water body after pH adjustment

Q096: The upward vertical rise prevails in which of the following plumes?
(A) Neutral (B) Looping (C) Trapping (D) Fanning

Q097: The closest representation of average composition of municipal solid waste in Indian cities is
(A) 20% organic, 40% inert and 40 % recyclable (B) 40% organic, 40% inert and 20 % recyclable
(C) 10% organic, 50% inert and 40 % recyclable (D) 30% organic, 10% inert and 60 % recyclable

Q098: As per the Government of Rajasthan web portal, Rajasthan is also known as Land of ____.
(A) Kingdom (B) Camels (C) Desert (D) Snakes

Q099: In a waste water sample Total Kjeldahl Nitrogen (TKN) represents
(A) Total Organic Nitrogen plus Total Ammonia (B) Total Inorganic Nitrogen
(C) Total Organic Nitrogen (D) Nitrate plus Nitrite

Q100: Wind-rose diagram is a graphical representation of which meteorological parameters?
(A) Wind direction and its duration in any direction
(B) Wind direction, wind speed and calm percentage
(C) Temperature, relative humidity, and calm duration
(D) Wind speed and percentage of calm duration

Q101: Which is the highest mountain peak of Rajasthan?
(A) Guru Shikhar (B) Ser (C) Achalgarh (D) Bairath

Q102: Which of the following is the most desirable?
(A) Separation at transfer station (B) Separation at central facility at landfill
(C) Separation at source (D) Separation at intermediate station or dhalao

Q103: Which one of the following is ***not*** a correct statement about vermi-composting?
(A) Only deep- burrowing earthworms are useful composters, the surface-dwelling type are not preferred
(B) During the passage through the worm's alimentary canal, the organic matter is converted to a simpler humus rich material due to the action of the enzymatic secretions and bacteria
(C) Only surface-dwelling earthworms are useful composters, the deep burrowing type are not preferred
(D) Most suitable species for vermi-composting are *Eisenia fetida* and *Eudrilus eugeniae*

Q104: What could comprise an Environmental Impact Statement under the current EIA notification?
(A) A report of Environmental Impact Assessment (B) A report of description of project details
(C) A report of description of site conditions (D) A report of description baseline data at site

Q105: Which of the following is ***not*** a suspended growth treatment system?
(A) Membrane Bio-Reactor (B) Sequencing Batch Reactor
(C) Activated Sludge Process (D) Trickling Filter

Q106: The following district of Rajasthan does ***not*** come under 'Hadauti region'
(A) Baran (B) Bundi (C) Pali (D) Kota

Q107: Bolo app is developed by _____ to help _____:
(A) Microsoft; people to prepare their speeches
(B) Facebook; children to speak better Hindi
(C) Google India; children to improve their English and Hindi reading skills
(D) Microsoft; people to understand all Indian languages

Q108: What is the concentration of H^+ ions (in moles/L) in water if the pOH value is 6?
(A) 10^{-9} (B) 10^{-6} (C) 10^{-7} (D) 10^{-8}

Q109: Which of the following removes both gaseous and particulate contaminants?
(A) Gravitational settling chamber (B) Bag filters
(C) Venturi scrubber (D) Dynamic precipitator

Q110: What is the most expensive component of solid waste handling?
(A) Separation (B) Storage (C) Treatment (D) Collection

Q111: What does the term obliquity indicate?
(A) Analysis of ocean currents (B) Earth's axial tilt of 23.5 degrees
(C) Pressure variation over different seasons (D) Alignment of the Earth's internal magnetic field

Q112: Ultimate analysis of solid waste includes the analysis of:
(A) C, H, O, N, S (B) C, H, O, N, K (C) C, H, O, P, N (D) C, H, P, K, O

Q113: Which of these IS Codes refers to 'Packaged Drinking Water (other than packaged natural mineral water)'?
(A) IS-13428 (B) IS-14543 (C) IS-15302 (D) IS-10500

Q114: Gas leaked in Bhopal tragedy was:
(A) Methyl isocyanate (B) Sodium isothiocyanate
(C) Potassium isothoiocynate (D) Ethyl isocyanate

Q115: For the formation of photochemical smog, we need
(A) Hydrocarbons + nitric oxide+ sunlight (B) Hydrocarbons + SO_x + sunlight
(C) SO_x + NO_x + sunlight (D) SPM + O_3 + sunlight

Q116: Assume that the BOD deoxygenation follows a first order reaction, $[Y = L_u (1 - e^{-kt})]$, rearranging it can be written as $[\{(L_u - Y)/L_u\} = e^{-kt}]$, where L_u is ultimate BOD, Y is the amount of BOD satisfied at any time, t, and k is rate constant. If 3-day BOD of a wastewater is 150 mg/L and 6-day BOD is 200 mg/L, what will be the ultimate BOD?
(A) 450 (B) 225 (C) 600 (D) 368

Q117: What is the value of atmospheric dry adiabatic lapse rate in Kelvin per km?
(A) 1 (B) 283 (C) 274 (D) 10

Q118: Which harmful compounds/gases are predominately emitted due to incomplete burning of petrol in vehicles?
(A) Carbon monoxide and hydrocarbons (B) Methane and ozone
(C) Ozone and Carbon monoxide (D) Nitrogen and Carbon monoxide

Q119: Which one of the following is a measurement unit of turbidity?
(A) FTU (B) CTU (C) NTU (D) KTU

Q120: Who built the Mehrangarh Fort in around 1459 at Jodhpur?
(A) Rao Jodha (B) Maharaja Sawai Man Singh
(C) Maharana Pratap (D) Rana Sanga

Q121: The Air (Prevention and Control of Pollution) Act, an Act of the Parliament of India to control and prevent air pollution was passed in the year.
(A) 1971 (B) 1991 (C) 1981 (D) 1998

Q122: Coning plume occurs under which conditions?
(A) Sub adiabatic (B) Inversion (C) Neutral (D) Super adiabatic

Q123: Chandrabhaga beach, which was the venue of the International Sand Art Festival 2020, is located in which state?
(A) Odisha (B) Tamil Nadu (C) Kerala (D) Gujarat

Q124: Select the correctly spelt word from the following.
(A) Elemantry (B) Elementary (C) Elimantry (D) Elimentry

Q125: Which of the following indicates the correct order of the principal layers of the earth's atmosphere from top to bottom?
(A) Troposphere - Stratosphere - Mesosphere - Thermosphere - Exosphere
(B) Thermosphere - Stratosphere - Troposphere - Mesosphere - Exosphere
(C) Exosphere - Thermosphere - Mesosphere - Stratosphere - Troposphere
(D) Exosphere - Mesosphere - Thermosphere - Stratosphere - Troposphere

Q126: The sound pressure is the force (N) of a sound on a surface area (m^2) perpendicular to the direction of the sound. The SI-unit for the Sound Pressure is N/m^2 or Pa. The Sound Pressure Level in decibel can be expressed as more conveniently as $L_p = 20 \log (p / p_{ref})$, where L_p = sound pressure level (dB), p = sound pressure (Pa), p_{ref} = reference sound pressure (Pa). What is the value of p_{ref} in the above equation in Pa?
(A) 10^{-5} (B) 10^{-12} (C) $2x10^{-5}$ (D) $2x10^{-12}$

Q127: What holds a planet's atmosphere close to its surface?
(A) Pressure (B) Gravity (C) Moisture (D) Radiation

Q128: Which district of Rajasthan is known for mica mixed hematite iron ore?
(A) Jaipur (B) Jodhpur (C) Kota (D) Bhilwara

Q129: To determine the heat of solution of NaOH, following set of procedures was used A) Read the initial temperature of water, B) Read the final temperature of water, C) Pour the water into a beaker, D) Stir the mixture, E) Add the sodium hydroxide. What is the correct order of procedures for making this determination?
(A) A - C - E - B - D (B) C - A - E - D - B
(C) E - D - C - A - B (D) C - E - D - A - B

Q130: The 'Sendai Framework" is related to:
(A) Ozone depletion
(B) Biodiversity conservation
(C) Disaster management
(D) Global warming

Q131: Which is the smallest fraction among the following?
(A) 7/9
(B) 4/5
(C) 8/11
(D) 9/13

Q132: If RAIN is written as 8$%6 and MORE is written as 7#8@, REMAIN will be written as:
(A) %6$7#8
(B) 8@7$%6
(C) #@7$68
(D) @678#$

Q133: The formation of ozone in troposphere depends on solar radiation and concentrations of
(A) NO_2 and Volatile organic compounds
(B) N_2O_5 and Volatile organic compounds
(C) NO_2 and NO
(D) HNO_3 and Volatile organic compounds

Q134: As per 'Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, the import of hazardous and other wastes from any country shall ***not*** be permitted for
(A) Safe disposal in engineered landfill
(B) Recovery and reuse
(C) Utilization including co-processing
(D) Recycling

Q135: Dhebar Lake (also known as Jaisamand Lake) is the second largest artificial lake in the world and first in Asia. In which district of Rajasthan is it situated?
(A) Kota
(B) Jodhpur
(C) Udaipur
(D) Ajmer

Q136: When wastewater is discharged in a river, mixing of wastewater and river water takes place and Dissolved Oxygen (DO) in river water starts depleting. Who for the first time proposed the method for prediction of the minimum DO concentration and the location where it occurs using DO-BOD coupled reactions?
(A) O'Connor-Dobbins
(B) Pasquill-Gifford
(C) Owens-Gibbs
(D) Streeter-Phelps

Q137: At what concentration (in ppm), is nitrogen present in the atmosphere?
(A) 7,80,840
(B) 78,084
(C) 3,90,420
(D) 9,00,000

Q138: The most common landfill sealant used for the control of gas and leachate movement is:
(A) Synthetic chemicals
(B) Asphalt
(C) Compacted Clay
(D) Inorganic chemicals

Q139: A postman walked 20 m straight from his office, turned right and walked 10 m. Then he turns left and walks 10 m and then turns right and walks a further 20 m, all in straight lines. He again turns right and walks a further 70 m. How far is he from his office?
(A) 40 m
(B) 35 m
(C) 50 m
(D) 100 m

Q140: Which of these is ***not*** a primary pollutant?
(A) Sulfur dioxide
(B) Carbon dioxide
(C) Carbon monoxide
(D) Ground level ozone

Q141: Most often, wastewater treatment plants are based on Activated Sludge Process (ASP). There are several modifications proposed in the process. Which of the following is ***not*** a modification of ASP?
(A) Contact Stabilization
(B) Extended Aeration
(C) Upflow Anaerobic Sludge Blanket
(D) Sequencing Batch Reactor

Q142: Which of the following sequences is most preferred in waste management?
(A) Prevention -> Segregation -> Reuse/Recovery -> Treatment -> Disposal
(B) Segregation -> Treatment -> Minimization -> Reuse/Recovery -> Disposal
(C) Reuse/Recovery -> Prevention -> Treatment -> Segregation -> Disposal
(D) Segregation -> Minimization -> Treatment -> Reuse/Recovery -> Disposal

Q143: What is the new-born mortality rate of India, as per the Sample Registration System (SRS), 2018?
(A) 18 per 1,000 live births (B) 20 per 1,000 live births
(C) 15 per 1,000 live births (D) 32 per 1,000 live births

Q144: Which Wetlands of India are registered under Montreux Record?
(A) Chilka Lake and Keoladeo National Park (B) Loktak Lake and Chilka lake
(C) Ashtmudi and Keoladeo National park (D) Keoladeo National Park and Loktak lake

Q145: Bani Thani is painted by:
(A) Nihal Chand (B) M F Hussain (C) Amrita Shergil (D) Samant Singh

Q146: What is the process of scrutiny, by the competent authority appointed under the current EIA notification, of the application and other documents submitted by the applicant for grant of environmental clearance called?
(A) Prediction (B) Assessment (C) Appraisal (D) Monitoring Baseline

Q147: Which method is ***not*** used for the analysis of any gaseous pollutant in ambient air?
(A) Jacob and Hochheiser modified method (B) Winkler method
(C) West and Gaeke method (D) Indophenol method

Q148: Which of the following is the state tree of Rajasthan?
(A) Neem (B) Mango (C) Babool (D) Khejari

Q149: According to the current EIA Notification in India, how many stages are involved in granting environmental clearance?
(A) 10 (B) 4 (C) 3 (D) 7

Q150: In habitat evaluation system, HQI is
(A) Habitat quantity instrument (B) Habitat quantity index
(C) Habitat quality index (D) Habitat quality instrument