

Q001: Pressure changes:

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

Q002: 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) E - D - C - A - B
- (C) C - A - E - D - B
- (D) C - E - D - A - B

Q003: Which of the following removes both gaseous and particulate contaminants?

- (A) Venturi scrubber
- (B) Gravitational settling chamber
- (C) Dynamic precipitator
- (D) Bag filters

Q004: What would have been the average temperature of Earth without greenhouse gases (in degree Celsius)?

- (A) 0
- (B) -7
- (C) -9
- (D) -19

Q005: The formation of ozone in troposphere depends on solar radiation and concentrations of

- (A) NO₂ and Volatile organic compounds
- (B) N₂O₅ and Volatile organic compounds
- (C) HNO₃ and Volatile organic compounds
- (D) NO₂ and NO

Q006: The upward vertical rise prevails in which of the following plumes?

- (A) Trapping
- (B) Fanning
- (C) Looping
- (D) Neutral

Q007: Which of the following wastewater treatment technologies can achieve effluent BOD less than 5 mg/L?

- (A) Activated Sludge Process
- (B) Trickling Filter
- (C) Anaerobic Upflow Sludge Blanket
- (D) Membrane Bio-Reactor

Q008: If RAIN is written as 8\$%6 and MORE is written as 7#8@, REMAIN will be written as:

- (A) #@7\$68
- (B) @678#\$
- (C) 8@7\$%6
- (D) %6\$7#8

Q009: What could comprise an Environmental Impact Statement under the current EIA notification?

- (A) A report of description of project details
- (B) A report of description of site conditions
- (C) A report of Environmental Impact Assessment
- (D) A report of description baseline data at site

Q010: The most common landfill sealant used for the control of gas and leachate movement is:

- (A) Compacted Clay
- (B) Synthetic chemicals
- (C) Asphalt
- (D) Inorganic chemicals

Q011: The Total Dissolved Solids (TDS) **cannot** be removed by which of the following methods?

- (A) Reverse Osmosis
- (B) Ion Exchange
- (C) Filtration
- (D) Distillation

Q012: How many individuals have won the Nobel Prize more than once?

- (A) 2
- (B) 4
- (C) 7
- (D) 9

Q013: Which of these IS Codes refers to 'Packaged Drinking Water (other than packaged natural mineral water)'?

- (A) IS-15302 (B) IS-10500 (C) IS-14543 (D) IS-13428

Q014: Which of the following statements is true?

- (A) Troposphere is equally thick across different parts of the world
(B) Troposphere contains the ozone layer
(C) Troposphere is thinner at the equator than at the poles
(D) Troposphere is thicker at the equator than at the poles

Q015: 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 $\gg K_m$ and when substrate concentration is $\ll K_m$?

- (A) 1, 0 (B) 0, 1 (C) 1, 1 (D) 0, 0

Q016: Bani Thani is painted by:

- (A) Samant Singh (B) Nihal Chand (C) Amrita Shergil (D) M F Hussain

Q017: Which is the competent authority for notifying the EIA notification in India?

- (A) CPCB (B) MoEF&CC (C) State Government (D) Law Ministry

Q018: 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) Waste to energy (B) Composting (C) Landfilling (D) Biomethanation

Q019: 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 B is easily biodegradable (B) Sample A is easily biodegradable
(C) Both samples are easily biodegraded (D) Both are non-biodegradable

Q020: What is the new-born mortality rate of India, as per the Sample Registration System (SRS), 2018?

- (A) 15 per 1,000 live births (B) 18 per 1,000 live births
(C) 20 per 1,000 live births (D) 32 per 1,000 live births

Q021: Air pollution from automobiles can be controlled by fitting:

- (A) Cyclone separator (B) Electrostatic precipitator
(C) Catalytic converter (D) Wet scrubber

Q022: Which of the following river flows its entire course within the state of Rajasthan?

- (A) Banas (B) Parbati (C) Kali Sindh (D) Luni

Q023: 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) Recycling (B) Recovery and reuse
(C) Utilization including co-processing (D) Safe disposal in engineered landfill

Q024: Which of the following is included in 3Ts of combustion?

- (A) Temperature, Time, Turbulence (B) Torque, Temperature, Time
(C) Turbulence, Technology, Time (D) Torque, Turbulence, Time

Q025: What holds a planet's atmosphere close to its surface?

- (A) Radiation (B) Gravity (C) Moisture (D) Pressure

Q026: Which of the following statements is **false**?

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

Q027: Gulf of Mannar biosphere reserve is located in

- (A) Tamil Nadu
- (B) Maharashtra
- (C) UP
- (D) West Bengal

Q028: According to the current EIA Notification in India, how many stages are involved in granting environmental clearance?

- (A) 3
- (B) 4
- (C) 7
- (D) 10

Q029: 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) Upflow Anaerobic Sludge Blanket
- (C) Extended Aeration
- (D) Sequencing Batch Reactor

Q030: At what concentration (in ppm), is nitrogen present in the atmosphere?

- (A) 7,80,840
- (B) 3,90,420
- (C) 78,084
- (D) 9,00,000

Q031: In Environmental Impact Assessment, the full form of CEQ is

- (A) Council on Educational Quality
- (B) Council on Environmental Quality
- (C) Center for Educational Quality
- (D) Centre for Environmental Quality

Q032: Which of the following cations does **not** cause hardness?

- (A) Ca^{2+}
- (B) Sr^{2+}
- (C) Mn^{2+}
- (D) Na^+

Q033: Which Wetlands of India are registered under Montreux Record?

- (A) Chilka Lake and Keoladeo National Park
- (B) Ashtmudi and Keoladeo National park
- (C) Loktak Lake and Chilka lake
- (D) Keoladeo National Park and Loktak lake

Q034: 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) 150 mg/L
- (B) 200 mg/L
- (C) 300 mg/L
- (D) 500 mg/L

Q035: Which state is considered as the cleanest state as per the Swachh Survekshan of 2020?

- (A) Kerala
- (B) Maharashtra
- (C) Chhattisgarh
- (D) Haryana

Q036: Which of the following is the nodal agency in the country for the United Nations Environment Programme (UNEP)?

- (A) Ministry of Environment, Forest and Climate Change
- (B) Central Pollution Control Board
- (C) Ministry of Environment Protection and Conservation
- (D) National Board for Wildlife, Afforestation and Eco-Development

Q037: Which of the following statements is **wrong** regarding permanent hardness?

- (A) It is also called carbonate hardness
- (B) It is due to the presence of sulfates, chlorides and nitrates of calcium and magnesium
- (C) It cannot be removed by boiling
- (D) It requires special methods of water softening to get removed

- Q038: Type 3 (polyvinyl chloride) plastic is commonly found in
 (A) Soft drinks and water bottles (B) Food packaging
 (C) Irrigation pipes (D) Shopping bags
- Q039: If in a particulate control system $PM_{2.5}$ to PM_{10} ratio jumped from 0.5 to 0.7, it implies that:
 (A) Both PM_{10} and $PM_{2.5}$ are removed equally effectively
 (B) A larger fraction of fine particles is removed
 (C) A larger fraction of coarse particles is removed
 (D) The ratio is not suggestive of fraction removed
- Q040: Wind-rose diagram is a graphical representation of which meteorological parameters?
 (A) Temperature, relative humidity, and calm duration
 (B) Wind direction and its duration in any direction
 (C) Wind speed and percentage of calm duration
 (D) Wind direction, wind speed and calm percentage
- Q041: Global warming means an increase in the average temperature of?
 (A) The sun (B) The ocean water
 (C) The earth's surface (D) The earth's inner core
- Q042: Which 'Indian American citizen' has been chosen by the Time Magazine as 'Kid of the year 2020'?
 (A) Geetanjali Rao (B) Megha Sharma (C) Sunita Williams (D) Kamala Harris
- Q043: For the formation of photochemical smog, we need
 (A) Hydrocarbons + SO_x + sunlight (B) Hydrocarbons + nitric oxide+ sunlight
 (C) SO_x + NO_x + sunlight (D) SPM + O_3 + sunlight
- Q044: Gas leaked in Bhopal tragedy was:
 (A) Methyl isocyanate (B) Potassium isothiocyanate
 (C) Ethyl isocyanate (D) Sodium isothiocyanate
- Q045: Sludge retention time of conventional activated sludge process is
 (A) 20-30 days (B) 50-60 days (C) 1-2 days (D) 5-15 days
- Q046: What is the value of atmospheric dry adiabatic lapse rate in Kelvin per km?
 (A) 1 (B) 274 (C) 10 (D) 283
- Q047: Nitrification is conversion of ___ to ____
 (A) Nitrite, Ammonia (B) Ammonia, Nitrate
 (C) Ammonia, Nitrogen Gas (D) Nitrate, Nitrogen Gas
- Q048: Which district of Rajasthan is known for mica mixed hematite iron ore?
 (A) Bhilwara (B) Jodhpur (C) Jaipur (D) Kota
- Q049: In which year the EIA notification was published for the first time in India?
 (A) 1974 (B) 1978 (C) 1981 (D) 1994
- Q050: What is the inertial method used to measure size of aerosol particles?
 (A) Particle acceleration method (B) Light scattering method
 (C) Electrical mobility method (D) Laser based sensor method
- Q051: For yellow color, AQI ranges between
 (A) 151-200 (B) 0-50 (C) 51-100 (D) 201-300

- Q052: Ajay Thakur received Padma Shree in 2019 for
 (A) Kho Kho (B) Kabaddi (C) Table Tennis (D) Basket Ball
- Q053: Coning plume occurs under which conditions?
 (A) Super adiabatic (B) Sub adiabatic (C) Neutral (D) Inversion
- Q054: What was the theme of World Environment Day 2020?
 (A) Beat Air Pollution (B) Beat Plastic Pollution
 (C) Go Wild for Life (D) Time for Nature
- Q055: The Forest (Conservation) Act was enacted in the year
 (A) 1927 (B) 1986 (C) 1980 (D) 1974
- Q056: If an industry discharges 4000 m³/day wastewater with BOD₅ of 800 mg/L into the municipal sewer having a sewage flow rate of 20 MLD with average BOD₅ of 200 mg/L, then what will be the BOD (mg/L) of mixed effluent?
 (A) 1000 (B) 600 (C) 500 (D) 300
- Q057: The activated sludge process consists of returning a fraction of the
 (A) Effluent leaving secondary clarifier (B) Sludge leaving the secondary clarifier
 (C) Sludge leaving the primary clarifier (D) Effluent leaving primary clarifier
- Q058: 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) 225 (B) 368 (C) 450 (D) 600
- Q059: What is the most expensive component of solid waste handling?
 (A) Separation (B) Collection (C) Treatment (D) Storage
- Q060: As per the Plastic Waste Management Rules 2016; the minimum thickness of plastic carry bags has been increased from 40 microns to:
 (A) 50 microns (B) 60 microns (C) 70 microns (D) 80 microns
- Q061: Which is the major anthropogenic source for sulphur dioxide?
 (A) Volcanic eruptions (B) Coal and crude oil combustion
 (C) Burning of petrol (D) Sewage treatment process
- Q062: Which model is suitable for assessing the impact of air pollutants on the environment?
 (A) NAMP (B) CAQMS (C) NAAQM (D) AERMOD
- Q063: Which one of the following is a measurement unit of turbidity?
 (A) KTU (B) FTU (C) NTU (D) CTU
- Q064: In which year was Ajmer merged into Rajasthan?
 (A) 1947 (B) 1950 (C) 1956 (D) 1960
- Q065: In COD test of sewage, organic matter is oxidized by K₂Cr₂O₇ in the presence of
 (A) H₂SO₄ (B) HNO₃ (C) HCL (D) Hydrofluoric acid (HF)
- Q066: 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) 250 (B) 300 (C) 75 (D) 100

Q067: Which of the following is **not** a suspended growth treatment system?

- (A) Activated Sludge Process (B) Trickling Filter
(C) Sequencing Batch Reactor (D) Membrane Bio-Reactor

Q068: What is a high pressure area with sinking air also known as?

- (A) Cyclone (B) Anti-cyclone (C) Eddy zone (D) Richardson zone

Q069: The National Green Tribunal has directed which state to prepare an action plan for 14 proposed elephant corridors?

- (A) Tamil Nadu (B) Kerala (C) Odisha (D) Maharashtra

Q070: 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) 80 days (B) 90 days (C) 100 days (D) 120 days

Q071: Bolo app is developed by _____ to help _____:

- (A) Facebook; children to speak better Hindi
(B) Microsoft; people to prepare their speeches
(C) Microsoft; people to understand all Indian languages
(D) Google India; children to improve their English and Hindi reading skills

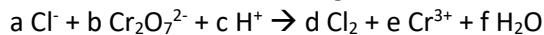
Q072: As per BIS 10500:2012, the limit of nitrates in drinking water as nitrate (as NO₃) is 45 mg/L. What will be the value if nitrate is reported as Nitrate-N?

- (A) 45 mg/L (B) 10 mg/L (C) 15 mg/L (D) 4.5 mg/L

Q073: What is the technical term for combating adverse impacts of the project?

- (A) Documentation (B) Evaluation (C) Prediction (D) Mitigation

Q074: Balance the following chemical oxidation-reduction reaction:



- (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=2, b=3, c=12, d=1, e=6, f=6 (D) a=6, b=1, c=14, d=3, e=2, f=7

Q075: Select the correctly spelt word from the following.

- (A) Elimantry (B) Elementary (C) Elemenantry (D) Elimentry

Q076: The sound pressure is the force (N) of a sound on a surface area (m²) perpendicular to the direction of the sound. The SI-unit for the Sound Pressure is N/m² 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) 2x10⁻⁵ (C) 10⁻¹² (D) 2x10⁻¹²

Q077: In a waste water sample Total Kjeldahl Nitrogen (TKN) represents

- (A) Total Organic Nitrogen plus Total Ammonia (B) Total Organic Nitrogen
(C) Total Inorganic Nitrogen (D) Nitrate plus Nitrite

Q078: Milk, detergent and carry bags/containers come under which category of plastic?

- (A) PET (B) PVC (C) HDPE (D) LDPE

Q079: When light is passed through a suspension, its intensity decreases due to

- (A) Both scattering and diffraction (B) Both diffraction and absorption
(C) Absorption only (D) Both scattering and absorption

Q080: The following district of Rajasthan does **not** come under 'Hadauti region'

- (A) Kota (B) Bundi (C) Baran (D) Pali

Q081: Which of the following pollutants is responsible for acid rain?

- (A) Oxides of Sulphur (B) Particulates (C) Methane (D) Carbon monoxide

Q082: Peroxyacyl nitrate (PAN), a pollutant in atmosphere

- (A) Decomposes into peroxyethanoyl radicals and nitrogen dioxide
(B) Decomposes into peroxybenzoyl nitrate (PBN)
(C) Decomposes into nitric acid
(D) Decomposes into poly aromatic hydrocarbon

Q083: As per the Government of Rajasthan web portal, Rajasthan is also known as Land of ____.

- (A) Snakes (B) Kingdom (C) Desert (D) Camels

Q084: Which method is used to measure the color of water?

- (A) Gravimetric analysis (B) Chromatography (C) Tintometer method (D) Hydrometer analysis

Q085: As per the 'State of India's Birds Report 2020', which bird species showed a big increase in population?

- (A) Indian Peacock (B) Great Indian Bustard (C) Curlew Sandpiper (D) Indian Vulture

Q086: Chandrabhaga beach, which was the venue of the International Sand Art Festival 2020, is located in which state?

- (A) Gujarat (B) Odisha (C) Tamil Nadu (D) Kerala

Q087: Which is the smallest fraction among the following?

- (A) $7/9$ (B) $4/5$ (C) $8/11$ (D) $9/13$

Q088: Which harmful compounds/gases are predominately emitted due to incomplete burning of petrol in vehicles?

- (A) Nitrogen and Carbon monoxide (B) Carbon monoxide and hydrocarbons
(C) Methane and ozone (D) Ozone and Carbon monoxide

Q089: 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) Operators of the solid waste processing and treatment facilities
(D) Individual waste generator

Q090: Which of the following is **not** used in control of air pollution?

- (A) Settling chamber (B) ESP (C) ETP (D) Cyclone

Q091: 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 I and II (B) Only II and III (C) Only I and III (D) All I, II, and III

Q092: Who built the Mehrangarh Fort in around 1459 at Jodhpur?

- (A) Maharana Pratap (B) Maharaja Sawai Man Singh
(C) Rao Jodha (D) Rana Sanga

Q093: In a conventional water treatment plant, which type of filter is commonly provided?

- (A) Pressure sand filter (B) Activated carbon filter
(C) Slow sand filter (D) Rapid sand gravity filter

Q094: 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 (NO₂) µg/m³. One of them is known as Modified Jacobs-Hochheiser (Na-Arsenite) method. What is the other method specified in NAAQS-2009 standards?

- (A) Ion chromatography (B) Gas Liquid Chromatography
(C) Chemiluminescence (D) Atomic Absorption Spectroscopy

Q095: The lowest sound level which is considered as hazardous noise pollution is:

- (A) 30 dB (B) 80 dB (C) 20 dB (D) 50 dB

Q096: What is the best way to reduce the noise pollution around houses?

- (A) Throwing all noisy machines (B) Built a noise resistant shield across the house
(C) Use of ear buds to reduce the noise (D) Planting trees around houses

Q097: Which of the following pollutants is the major contributor to photochemical smog?

- (A) Peroxynitrates (B) Hydroperoxides (C) Nitrogen dioxide (D) Ozone

Q098: 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) Pasquill-Gifford (B) Streeter-Phelps (C) O'Connor-Dobbins (D) Owens-Gibbs

Q099: Which Indian minister delivered keynote address in Sri Lanka Economic Summit (SLES) 2020?

- (A) Piyush Goyal (B) Nirmala Sitharaman
(C) Nitin Gadkari (D) S Jai Shankar

Q100: On 20th January 2021, Joe Biden took oath as _____ President of the United States of America.

- (A) 42nd (B) 45th (C) 46th (D) 47th

Q101: Which one of the following is an appropriate leachate management system for a compost plant used for horticulture waste?

- (A) It should be disposed of in nearby water body after pH adjustment
(B) It should be re-circulated in the compost plant for moisture management
(C) It should be concentrated using multi effect evaporators before disposal
(D) It should be used for irrigation purpose

Q102: Who did Rana Sanga defeat in the battle of Khatoli?

- (A) Akbar (B) Sikandar Lodhi (C) Babur (D) Ibrahim Lodhi

Q103: Who became the first bowler in Cricket to take 500 T20 wickets?

- (A) Md. Shami (B) Dwayne Bravo (C) Andre Russel (D) Ishant Sharma

Q104: In which district is Haldi Ghati located?

- (A) Chittorgarh (B) Pratapgarh (C) Kota (D) Rajsamand

Q105: The plume rise mainly has the following two components:

- (A) Thermal and momentum buoyancy (B) Wind drift and momentum buoyancy
(C) Density difference and thermal buoyancy (D) Chemical reactivity and thermal buoyancy

Q106: 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) Autoclaving (B) Microwaving
(C) Incineration/deep burial (D) Chemical treatment

Q107: Which Indian Tiger reserve has won the UNDP's TX2 global award for doubling tiger population?

- (A) Pilibhit Tiger Reserve (B) Bandipur Tiger Reserve
(C) Corbett Tiger Reserve (D) Kanha Tiger Reserve

Q108: What does the abbreviation NDIR stand for, in the category of spectrometric analyses?

- (A) Non-Destructive Integrated Restoration (B) Neo-Destructive Integrated Radiation
(C) Non-Dispersive Infrared (D) Neo-Dispersive Integrated Radiation

Q109: 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) Appraisal (B) Assessment (C) Monitoring Baseline (D) Prediction

Q110: The 'Sendai Framework' is related to:

- (A) Global warming (B) Disaster management
(C) Ozone depletion (D) Biodiversity conservation

Q111: What is the major objection to the use of municipal sewage sludge as a fertilizer?

- (A) Heavy metals (B) Organic content (C) Phosphates (D) Potash

Q112: Which one of the following is applicable for controlling transboundary movement of Hazardous Wastes?

- (A) Stockholm Treaty on Import and Export of Hazardous Wastes and Substance
(B) Basel Convention on Transboundary Movement of Hazardous Wastes
(C) Kyoto Treaty on Import and Export of Hazardous Wastes and Substance
(D) Rotterdam Protocol on Transboundary Movement of Hazardous Wastes

Q113: 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) 3.53 (C) 3.2 (D) 1.42

Q114: 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 anions and reanalyse cations
(C) Reanalyse both cations and anions (D) Accept cations and reanalyse anions

Q115: As per the EIA notification, 2006, the full form of SEAC is

- (A) State Environmental and Academic Council (B) State Education and Academic Council
(C) State Environmental Affairs Council (D) State level Environmental Appraisal Committee

Q116: Which of the following should be **avoided** in hilly areas?

- (A) Construction of engineered municipal solid waste disposal landfill
(B) Transfer station to collect residual waste from the processing facility and inert waste
(C) Composting facility for biodegradable waste
(D) The material segregation and recovery facility

Q117: 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

Q118: Which of the following is the most desirable?

- (A) Separation at source (B) Separation at intermediate station or dhalao
(C) Separation at central facility at landfill (D) Separation at transfer station

Q119: Which is the highest mountain peak of Rajasthan?

- (A) Achalgarh (B) Bairath (C) Ser (D) Guru Shikhar

Q120: For domestic wastewater 5-day BOD value represents _____ percent of the total BOD

- (A) 70-80 (B) 10-20 (C) 30-40 (D) 100

Q121: Which one of the following is **not** a fossil fuel?

- (A) Natural gas (B) Petrol (C) Coal (D) Uranium

Q122: Ultimate analysis of solid waste includes the analysis of:

- (A) C, H, P, K, O (B) C, H, O, N, S (C) C, H, O, P, N (D) C, H, O, N, K

Q123: 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) Ajmer (C) Jodhpur (D) Udaipur

Q124: 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) 50 m (B) 35 m (C) 40 m (D) 100 m

Q125: 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) 27 (B) 33 (C) 45 (D) 54

Q126: 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) Landfill (B) Incineration (C) Composting (D) Dumping in Sea

Q127: What is the main source of vehicular noise?

- (A) High speed
(B) Movement of the vehicle's tyres on the pavement
(C) Low pressure
(D) Fuel engine

Q128: In habitat evaluation system, HQI is

- (A) Habitat quantity index (B) Habitat quality instrument
(C) Habitat quantity instrument (D) Habitat quality index

Q129: The 24-hour National Ambient Air Quality Standard for PM_{2.5} in India is (in µg/m³):

- (A) 20 (B) 50 (C) 60 (D) 75

Q130: Plant protection code is a set of guidelines for regulating chemical inputs in:

- (A) Fruits (B) Vegetables (C) Cereals (D) Tea

Q131: What is the major disadvantage of incineration?

- (A) It requires microorganisms
- (B) Large volume reduction of the waste
- (C) It causes several air pollution issues
- (D) Heat generation

Q132: For effective composting of municipal solid waste, initial C/N ratio of the waste should be

- (A) Between 26 to 32
- (B) Less than 18
- (C) More than 42
- (D) Equal to 47

Q133: How does atmospheric pressure vary with increase in altitude?

- (A) It decreases linearly
- (B) It decreases exponentially
- (C) It increases linearly
- (D) It increases till stratosphere and then starts decreasing exponentially

Q134: In India, which informal sector plays crucial rule in following solid waste management functions?

- (A) Collection
- (B) Segregation
- (C) Recycling
- (D) Recovering

Q135: Which one of the following is **not** a correct statement about vermi-composting?

- (A) 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
- (B) Only surface-dwelling earthworms are useful composters, the deep burrowing type are not preferred
- (C) Only deep- burrowing earthworms are useful composters, the surface-dwelling type are not preferred
- (D) Most suitable species for vermi-composting are *Eisenia fetida* and *Eudrilus eugeniae*

Q136: Which of the following is the state tree of Rajasthan?

- (A) Khejari
- (B) Babool
- (C) Neem
- (D) Mango

Q137: 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

Q138: Which of the following sequences is most preferred in waste management?

- (A) Segregation -> Minimization -> Treatment -> Reuse/Recovery -> Disposal
- (B) Reuse/Recovery -> Prevention -> Treatment -> Segregation -> Disposal
- (C) Segregation -> Treatment -> Minimization -> Reuse/Recovery -> Disposal
- (D) Prevention -> Segregation -> Reuse/Recovery -> Treatment -> Disposal

Q139: The closest representation of average composition of municipal solid waste in Indian cities is

- (A) 40% organic, 40% inert and 20 % recyclable
- (B) 10% organic, 50% inert and 40 % recyclable
- (C) 30% organic, 10% inert and 60 % recyclable
- (D) 20% organic, 40% inert and 40 % recyclable

Q140: Which method is **not** used for the analysis of any gaseous pollutant in ambient air?

- (A) West and Gaeke method
- (B) Jacob and Hochheiser modified method
- (C) Indophenol method
- (D) Winkler method

Q141: Diameter of pollen grains in the air range between

- (A) 1-10 μm
- (B) 0.1-1.0 μm
- (C) 0.001-0.1 μm
- (D) 10-100 μm

Q142: What does the term obliquity indicate?

- (A) Earth's axial tilt of 23.5 degrees
- (B) Alignment of the Earth's internal magnetic field
- (C) Analysis of ocean currents
- (D) Pressure variation over different seasons

Q143: What is the concentration of H⁺ ions (in moles/L) in water if the pOH value is 6?
(A) 10⁻⁶ (B) 10⁻⁷ (C) 10⁻⁸ (D) 10⁻⁹

Q144: Of the following technical options in plastic waste reuse/recycle, which one has witnessed more success in India?
(A) Bitumen Roads (B) Pyrolysis (C) Incineration (D) Landfilling

Q145: 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) 0.224 liter (C) 11.2 liter (D) 44.8 liter

Q146: Which of these is **not** a primary pollutant?
(A) Carbon monoxide (B) Carbon dioxide
(C) Ground level ozone (D) Sulfur dioxide

Q147: Which of the following indicates the correct order of the principal layers of the earth's atmosphere from top to bottom?
(A) Thermosphere - Stratosphere - Troposphere - Mesosphere - Exosphere
(B) Exosphere - Mesosphere - Thermosphere - Stratosphere - Troposphere
(C) Troposphere - Stratosphere - Mesosphere - Thermosphere - Exosphere
(D) Exosphere - Thermosphere - Mesosphere - Stratosphere - Troposphere

Q148: Chlorides are estimated by titration with a standard silver nitrate solution by using _____ as an indicator.
(A) Potassium manganate (B) Potassium chloride
(C) Potassium chromate (D) Potassium dichromate

Q149: As per CPCB, the biomedical waste, if any, generated from quarantine centers/camps, should be collected separately in ___ bags.
(A) Yellow (B) Black (C) Red (D) Blue

Q150: 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) A renowned environmentalist or academician of the country
(B) Minister of Environment, Forest and Climate Change
(C) Minister of Environment and Forest
(D) Prime Minister