

Q001: The closest representation of average composition of municipal solid waste in Indian cities is
(A) 10% organic, 50% inert and 40 % recyclable (B) 20% organic, 40% inert and 40 % recyclable
(C) 40% organic, 40% inert and 20 % recyclable (D) 30% organic, 10% inert and 60 % recyclable

Q002: According to the current EIA Notification in India, how many stages are involved in granting environmental clearance?

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

Q003: Ultimate analysis of solid waste includes the analysis of:

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

Q004: For domestic wastewater 5-day BOD value represents ____ percent of the total BOD

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

Q005: As per the EIA notification, 2006, the full form of SEAC is

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

Q006: Which method is used to measure the color of water?

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

Q007: What is a high pressure area with sinking air also known as?

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

Q008: 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) 45 (B) 33 (C) 54 (D) 27

Q009: In COD test of sewage, organic matter is oxidized by $K_2Cr_2O_7$ in the presence of

(A) HNO_3 (B) HCL
(C) Hydrofluoric acid (HF) (D) H_2SO_4

Q010: Coning plume occurs under which conditions?

(A) Neutral (B) Inversion (C) Sub adiabatic (D) Super adiabatic

Q011: 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) 2×10^{-5} (B) 2×10^{-12} (C) 10^{-12} (D) 10^{-5}

Q012: Nitrification is conversion of ____ to ____

(A) Nitrate, Nitrogen Gas (B) Ammonia, Nitrogen Gas
(C) Nitrite, Ammonia (D) Ammonia, Nitrate

Q013: What holds a planet's atmosphere close to its surface?

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

Q014: Which of the following is the most desirable?

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

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

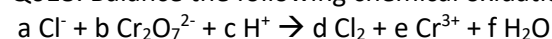
Q016: Which one of the following is an appropriate leachate management system for a compost plant used for horticulture waste?

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

Q017: What is the main source of vehicular noise?

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

Q018: Balance the following chemical oxidation-reduction reaction:



- (A) a=6, b=1, c=14, d=3, e=2, f=7 (B) a=4, b=3, c=12, d=2, e=3, f=6
- (C) a=2, b=3, c=12, d=1, e=6, f=6 (D) a=6, b=2, c=16, d=6, e=2, f=8

Q019: Which of the following pollutants is the major contributor to photochemical smog?

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

Q020: Which is the smallest fraction among the following?

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

Q021: 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) 200 mg/L (B) 150 mg/L (C) 300 mg/L (D) 500 mg/L

Q022: Which is the competent authority for notifying the EIA notification in India?

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

Q023: What was the theme of World Environment Day 2020?

- (A) Beat Air Pollution (B) Go Wild for Life (C) Beat Plastic Pollution (D) Time for Nature

Q024: 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) Incineration (B) Composting (C) Dumping in Sea (D) Landfill

Q025: What could comprise an Environmental Impact Statement under the current EIA notification?

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

Q026: As per the Government of Rajasthan web portal, Rajasthan is also known as Land of ____.

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

Q027: 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

Q028: Bani Thani is painted by:

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

Q029: As per the 'State of India's Birds Report 2020', which bird species showed a big increase in population?

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

Q030: Milk, detergent and carry bags/containers come under which category of plastic?

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

Q031: 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) 100 m (B) 40 m (C) 35 m (D) 50 m

Q032: Which model is suitable for assessing the impact of air pollutants on the environment?

- (A) AERMOD (B) CAQMS (C) NAAQM (D) NAMP

Q033: 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 cations and reanalyse anions (B) Accept as correct analysis
(C) Reanalyse both cations and anions (D) Accept anions and reanalyse cations

Q034: Plant protection code is a set of guidelines for regulating chemical inputs in:

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

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

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

Q036: 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) Exosphere - Mesosphere - Thermosphere - Stratosphere - Troposphere
(C) Thermosphere - Stratosphere - Troposphere - Mesosphere - Exosphere
(D) Exosphere - Thermosphere - Mesosphere - Stratosphere - Troposphere

Q037: Sludge retention time of conventional activated sludge process is

- (A) 5-15 days (B) 20-30 days (C) 50-60 days (D) 1-2 days

Q038: The lowest sound level which is considered as hazardous noise pollution is:

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

Q039: In Environmental Impact Assessment, the full form of CEQ is

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

Q040: What is the major disadvantage of incineration?

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

Q041: Which 'Indian American citizen' has been chosen by the Time Magazine as 'Kid of the year 2020'?

- (A) Geetanjali Rao (B) Sunita Williams (C) Kamala Harris (D) Megha Sharma

Q042: In which year was Ajmer merged into Rajasthan?

- (A) 1947 (B) 1950 (C) 1960 (D) 1956

Q043: Which of the following is included in 3Ts of combustion?

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

Q044: 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) 44.8 liter (B) 11.2 liter (C) 22.4 liter (D) 0.224 liter

Q045: What is the value of atmospheric dry adiabatic lapse rate in Kelvin per km?

- (A) 283 (B) 274 (C) 1 (D) 10

Q046: 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) Utilization including co-processing (B) Recovery and reuse
(C) Safe disposal in engineered landfill (D) Recycling

Q047: Which Wetlands of India are registered under Montreux Record?

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

Q048: 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) $\mu\text{g}/\text{m}^3$. One of them is known as Modified Jacobs-Hochheiser (Na-Arsenite) method. What is the other method specified in NAAQS-2009 standards?

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

Q049: In which district is Haldi Ghati located?

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

Q050: Which of these IS Codes refers to 'Packaged Drinking Water (other than packaged natural mineral water)'?

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

Q051: 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) Owens-Gibbs (C) Streeter-Phelps (D) O'Connor-Dobbins

Q052: How many individuals have won the Nobel Prize more than once?

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

Q053: Who built the Mehrangarh Fort in around 1459 at Jodhpur?

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

Q054: Which of the following statements is **false**?

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

Q055: Which of the following river flows its entire course within the state of Rajasthan?

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

Q056: In India, which informal sector plays crucial role in following solid waste management functions?

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

Q057: Which one of the following is applicable for controlling transboundary movement of Hazardous Wastes?

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

Q058: 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) Assessment (B) Monitoring Baseline (C) Prediction (D) Appraisal

Q059: Which one of the following is **not** a correct statement about vermi-composting?

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

Q060: Of the following technical options in plastic waste reuse/recycle, which one has witnessed more success in India?

- (A) Landfilling (B) Bitumen Roads (C) Pyrolysis (D) Incineration

Q061: In which year the EIA notification was published for the first time in India?

- (A) 1974 (B) 1994 (C) 1981 (D) 1978

Q062: Which of the following is **not** a suspended growth treatment system?

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

Q063: As per CPCB, the biomedical waste, if any, generated from quarantine centers/camps, should be collected separately in ___ bags.

- (A) Blue (B) Red (C) Yellow (D) Black

Q064: The National Green Tribunal has directed which state to prepare an action plan for 14 proposed elephant corridors?

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

Q065: Peroxyacyl nitrate (PAN), a pollutant in atmosphere
(A) Decomposes into peroxyethanoyl radicals and nitrogen dioxide
(B) Decomposes into nitric acid
(C) Decomposes into poly aromatic hydrocarbon
(D) Decomposes into peroxybenzoyl nitrate (PBN)

Q066: Air pollution from automobiles can be controlled by fitting:
(A) Electrostatic precipitator (B) Catalytic converter
(C) Cyclone separator (D) Wet scrubber

Q067: Which is the highest mountain peak of Rajasthan?
(A) Guru Shikhar (B) Achalgarh (C) Ser (D) Bairath

Q068: 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 III (B) Only I and II (C) All I, II, and III (D) Only II and III

Q069: Select the correctly spelt word from the following.
(A) Elementary (B) Elimantry (C) Elimentry (D) Elemantry

Q070: Which of the following cations does **not** cause hardness?
(A) Na⁺ (B) Sr²⁺ (C) Mn²⁺ (D) Ca²⁺

Q071: Which Indian minister delivered keynote address in Sri Lanka Economic Summit (SLES) 2020?
(A) Nitin Gadkari (B) Nirmala Sitharaman (C) Piyush Goyal (D) S Jai Shankar

Q072: Who did Rana Sanga defeat in the battle of Khatoli?
(A) Akbar (B) Sikandar Lodhi (C) Babur (D) Ibrahim Lodhi

Q073: What could be inferred from the following samples concerning the relative ease of biodegradability, Sample A (BOD₅ / COD = 24 / 30) and Sample B (BOD₅ / COD = 10 / 50)?
(A) Sample B is easily biodegradable (B) Sample A is easily biodegradable
(C) Both are non-biodegradable (D) Both samples are easily biodegraded

Q074: The most common landfill sealant used for the control of gas and leachate movement is:
(A) Asphalt (B) Inorganic chemicals
(C) Compacted Clay (D) Synthetic chemicals

Q075: What is the concentration of H⁺ ions (in moles/L) in water if the pOH value is 6?
(A) 10⁻⁸ (B) 10⁻⁷ (C) 10⁻⁶ (D) 10⁻⁹

Q076: 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) 120 days (B) 80 days (C) 100 days (D) 90 days

Q077: Which of the following statements is true?
(A) Troposphere is thinner at the equator than at the poles
(B) Troposphere is thicker at the equator than at the poles
(C) Troposphere contains the ozone layer
(D) Troposphere is equally thick across different parts of the world

Q078: 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

Q079: Which one of the following is a measurement unit of turbidity?

- (A) CTU
- (B) NTU
- (C) KTU
- (D) FTU

Q080: The formation of ozone in troposphere depends on solar radiation and concentrations of

- (A) HNO_3 and Volatile organic compounds
- (B) NO_2 and NO
- (C) NO_2 and Volatile organic compounds
- (D) N_2O_5 and Volatile organic compounds

Q081: Source segregation and storage of the waste generated in separate streams is the responsibility of

- (A) Local civic authorities
- (B) Operators of the solid waste processing and treatment facilities
- (C) Waste pickers and waste collectors
- (D) Individual waste generator

Q082: For the formation of photochemical smog, we need

- (A) SO_x + NO_x + sunlight
- (B) Hydrocarbons + SO_x + sunlight
- (C) SPM + O_3 + sunlight
- (D) Hydrocarbons + nitric oxide + sunlight

Q083: In habitat evaluation system, HQI is

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

Q084: Which of the following wastewater treatment technologies can achieve effluent BOD less than 5 mg/L?

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

Q085: Gas leaked in Bhopal tragedy was:

- (A) Sodium isothiocyanate
- (B) Potassium isothiocyanate
- (C) Ethyl isocyanate
- (D) Methyl isocyanate

Q086: If an industry discharges $4000 \text{ m}^3/\text{day}$ 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) 300
- (D) 600

Q087: Chlorides are estimated by titration with a standard silver nitrate solution by using _____ as an indicator.

- (A) Potassium chloride
- (B) Potassium manganate
- (C) Potassium dichromate
- (D) Potassium chromate

Q088: What does the term obliquity indicate?

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

Q089: Who became the first bowler in Cricket to take 500 T20 wickets?

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

Q090: Pressure changes:

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

Q091: 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) 50 microns (C) 60 microns (D) 80 microns

Q092: Wind-rose diagram is a graphical representation of which meteorological parameters?

- (A) Wind direction, wind speed and calm percentage
(B) Wind direction and its duration in any direction
(C) Temperature, relative humidity, and calm duration
(D) Wind speed and percentage of calm duration

Q093: The 24-hour National Ambient Air Quality Standard for PM_{2.5} in India is (in $\mu\text{g}/\text{m}^3$):

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

Q094: How does atmospheric pressure vary with increase in altitude?

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

Q095: 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) 100 (B) 75 (C) 300 (D) 250

Q096: Which of these is **not** a primary pollutant?

- (A) Carbon dioxide (B) Ground level ozone
(C) Sulfur dioxide (D) Carbon monoxide

Q097: 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) Chemical treatment
(C) Microwaving (D) Autoclaving

Q098: What would have been the average temperature of Earth without greenhouse gases (in degree Celsius)?

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

Q099: The Total Dissolved Solids (TDS) **cannot** be removed by which of the following methods?

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

Q100: The plume rise mainly has the following two components:

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

- Q101: 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) 10 mg/L (B) 4.5 mg/L (C) 45 mg/L (D) 15 mg/L
- Q102: Which one of the following is **not** a fossil fuel?
 (A) Natural gas (B) Uranium (C) Petrol (D) Coal
- Q103: 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) Udaipur (C) Jodhpur (D) Ajmer
- Q104: Gulf of Mannar biosphere reserve is located in
 (A) UP (B) West Bengal (C) Maharashtra (D) Tamil Nadu
- Q105: In a waste water sample Total Kjeldahl Nitrogen (TKN) represents
 (A) Total Organic Nitrogen (B) Nitrate plus Nitrite
 (C) Total Inorganic Nitrogen (D) Total Organic Nitrogen plus Total Ammonia
- Q106: 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) 1981 (B) 1971 (C) 1998 (D) 1991
- Q107: What is the technical term for combating adverse impacts of the project?
 (A) Documentation (B) Prediction (C) Evaluation (D) Mitigation
- Q108: What is the most expensive component of solid waste handling?
 (A) Storage (B) Collection (C) Treatment (D) Separation
- Q109: 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
- Q110: Type 3 (polyvinyl chloride) plastic is commonly found in
 (A) Irrigation pipes (B) Food packaging
 (C) Soft drinks and water bottles (D) Shopping bags
- Q111: The 'Sendai Framework' is related to:
 (A) Biodiversity conservation (B) Ozone depletion
 (C) Disaster management (D) Global warming
- Q112: Ajay Thakur received Padma Shree in 2019 for
 (A) Basket Ball (B) Kho Kho (C) Kabaddi (D) Table Tennis
- Q113: When light is passed through a suspension, its intensity decreases due to
 (A) Both scattering and absorption (B) Both diffraction and absorption
 (C) Absorption only (D) Both scattering and diffraction
- Q114: The Forest (Conservation) Act was enacted in the year
 (A) 1927 (B) 1986 (C) 1974 (D) 1980

Q115: What does the abbreviation NDIR stand for, in the category of spectrometric analyses?
(A) Non-Dispersive Infrared (B) Neo-Dispersive Integrated Radiation
(C) Non-Destructive Integrated Restoration (D) Neo-Destructive Integrated Radiation

Q116: What is the inertial method used to measure size of aerosol particles?
(A) Light scattering method (B) Laser based sensor method
(C) Particle acceleration method (D) Electrical mobility method

Q117: What is the major objection to the use of municipal sewage sludge as a fertilizer?
(A) Organic content (B) Heavy metals (C) Phosphates (D) Potash

Q118: Chandrabhaga beach, which was the venue of the International Sand Art Festival 2020, is located in which state?
(A) Kerala (B) Gujarat (C) Odisha (D) Tamil Nadu

Q119: In a conventional water treatment plant, which type of filter is commonly provided?
(A) Rapid sand gravity filter (B) Slow sand filter
(C) Pressure sand filter (D) Activated carbon filter

Q120: 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

Q121: On 20th January 2021, Joe Biden took oath as _____ President of the United States of America.
(A) 47th (B) 46th (C) 42nd (D) 45th

Q122: 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) Biomethanation (B) Waste to energy (C) Landfilling (D) Composting

Q123: If in a particulate control system PM_{2.5} to PM₁₀ ratio jumped from 0.5 to 0.7, it implies that:
(A) A larger fraction of fine particles is removed
(B) The ratio is not suggestive of fraction removed
(C) Both PM₁₀ and PM_{2.5} are removed equally effectively
(D) A larger fraction of coarse particles is removed

Q124: At what concentration (in ppm), is nitrogen present in the atmosphere?
(A) 7,80,840 (B) 9,00,000 (C) 3,90,420 (D) 78,084

Q125: Which of the following is the state tree of Rajasthan?
(A) Mango (B) Neem (C) Babool (D) Khejari

Q126: 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) Sequencing Batch Reactor (D) Extended Aeration

Q127: 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) Throwing all noisy machines (D) Planting trees around houses

Q128: Global warming means an increase in the average temperature of?

- (A) The earth's surface (B) The earth's inner core
(C) The sun (D) The ocean water

Q129: Which Indian Tiger reserve has won the UNDP's TX2 global award for doubling tiger population?

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

Q130: Which harmful compounds/gases are predominately emitted due to incomplete burning of petrol in vehicles?

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

Q131: Which method is **not** used for the analysis of any gaseous pollutant in ambient air?

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

Q132: What is the next number in the sequence 4,6,8,9,12,12,16,15,20,___?

- (A) 21 (B) 5 (C) 33 (D) 18

Q133: Which of the following should be **avoided** in hilly areas?

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

Q134: Bolo app is developed by _____ to help _____:

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

Q135: Which of the following pollutants is responsible for acid rain?

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

Q136: Which of the following sequences is most preferred in waste management?

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

Q137: For effective composting of municipal solid waste, initial C/N ratio of the waste should be

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

Q138: Which of the following is **not** used in control of air pollution?

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

Q139: The following district of Rajasthan does **not** come under 'Hadauti region'

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

Q140: Which of the following removes both gaseous and particulate contaminants?

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

- Q141: If RAIN is written as 8\$%6 and MORE is written as 7#8@, REMAIN will be written as:
 (A) #@7\$68 (B) 8@7\$%6 (C) @678#\$ (D) %6\$7#8
- Q142: Which district of Rajasthan is known for mica mixed hematite iron ore?
 (A) Jodhpur (B) Jaipur (C) Kota (D) Bhilwara
- Q143: The upward vertical rise prevails in which of the following plumes?
 (A) Looping (B) Neutral (C) Fanning (D) Trapping
- Q144: 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) 1.42 (D) 3.2
- Q145: For yellow color, AQI ranges between
 (A) 151-200 (B) 0-50 (C) 201-300 (D) 51-100
- Q146: 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) 450 (C) 368 (D) 600
- Q147: Diameter of pollen grains in the air range between
 (A) 0.1-1.0 μm (B) 0.001-0.1 μm (C) 10-100 μm (D) 1-10 μm
- Q148: Which is the major anthropogenic source for sulphur dioxide?
 (A) Burning of petrol (B) Coal and crude oil combustion
 (C) Volcanic eruptions (D) Sewage treatment process
- Q149: The activated sludge process consists of returning a fraction of the
 (A) Effluent leaving secondary clarifier (B) Effluent leaving primary clarifier
 (C) Sludge leaving the secondary clarifier (D) Sludge leaving the primary clarifier
- 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) Minister of Environment and Forest
 (B) Minister of Environment, Forest and Climate Change
 (C) A renowned environmentalist or academician of the country
 (D) Prime Minister