**Question Bank for Environmental Science degree programme**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject MCQ’s** | | | | | | | | | | **Answer Key** |
|  | | Environmental studies focus on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | | | | | | | A |
| A. | | Biotic and abiotic factors | | B. | | Microbial functions | |
| C. | | Geological factors | | D. | | Hydrogeochemical factors | |
|  | | pH is negative log of \_\_\_\_\_\_\_\_\_\_\_\_\_concentration | | | | | | | | B |
| A. | | Hydroxyl ion | | B. | | Hydrogen ion | |
| C. | | Hydrogen peroxide | | D. | | Hydronium ions | |
|  | | A pollutant that is resistant to degradation and takes years to break down is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | | | | | | | B |
| A. | | Carcinogenic | | B. | | Persistent | |
| C. | | Hazardous | | D. | | Toxic | |
|  | | Pollution prevention is usually more \_\_\_\_\_\_\_\_\_\_\_\_\_\_ than pollution cleanup. | | | | | | | | B |
| A. | | Expensive | | B. | | Cheap | |
| C. | | Dangerous | | D. | | Hazardous | |
|  | | Public water supplies are often evaluated for biological contamination by testing for the presence of: | | | | | | | | D |
| A. | | Heavy metals | | B. | | Fungi | |
| C. | | Pesticides | | D. | | E-Coli | |
|  | | An example of ozone-depleting substances is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | | | | | | | A |
| A. | | Chlorofluorocarbon | | B. | | Sulfur oxide | |
| C. | | Carbon dioxide | | D. | | Chlorofluorocarbon and chlorohydrocarbon | |
|  | | Sorption is defined as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ retention of ions present in solution on a solid surface. | | | | | | | | D |
| A. | | Chemical | | B. | | Biological | |
| C. | | Physical | | D. | | Chemical and Physical | |
|  | | Langmuir sorption isotherm explains \_\_\_\_\_\_\_\_\_\_\_\_ sorption of ions on solid surface. | | | | | | | | A |
| A. | | Homogeneous | | B. | | Heterogeneous | |
| C. | | Uniform | | D. | | Non-uniform | |
|  | | Chemical degradation of an organic pollutant (e.g., POPs) in soil is dependent mainly on the \_\_\_\_\_\_\_\_. | | | | | | | | C |
| A. | | Redox conditions | | B. | | Mycorrhizae | |
| C. | | Oxidants or reductants | | D. | | Oxygen concentration | |
|  | | \_\_\_\_\_\_\_\_are the standards that governments establish to manage natural resources and environmental quality. | | | | | | | | A |
| A. | | Environmental laws | | B. | | Environmental policies | |
| C. | | Management system | | D. | | Both A and B | |
|  | | Pakistan (Punjab) Environmental Act analyzes the law governing the \_\_\_\_\_\_\_\_\_\_\_ and the processes and activities that have impact on natural resource management. | | | | | | | | C |
| A. | | Water resources | | B. | | Land resources | |
| C. | | Natural resources | | D. | | Plant resources | |
|  | | PEPA 1997 was amended in 2012 after the \_\_\_\_ amendment in the constitution of Pakistan. | | | | | | | | C |
| A. | | 17th | | B. | | 20th | |
| C. | | 18th | | D. | | 16th | |
|  | | Which of the following is not a waterborne disease? | | | | | | | | D |
| A. | | Hepatitis | | B. | | Typhoid | |
| C. | | Cholera | | D. | | Measles | |
|  | | Environmental magistrate is of First Class who is appointed under section \_\_\_\_\_\_. | | | | | | | | D |
| A. | | 22 | | B. | | 24 | |
| C. | | 18 | | D. | | 20 | |
|  | | Environmental Tribunal means the Environmental Tribunal constituted under section \_\_\_\_ | | | | | | | | C |
| A. | | 21 | | B. | | 19 | |
| C. | | 20 | | D. | | 10 | |
|  | | Minamata disease was first detected in: | | | | | | | | B |
| A. | | Mexico | | B. | | Japan | |
| C. | | Brazil | | D. | | USA | |
|  | | The NEQS stands for \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | | | D |
| A. | | National Eco-Quality Standards Status | | B. | | National Eco-Quality Support | |
| C. | | National Environmental Qualifying Standards | | D. | | National Environmental Quality Standards | |
|  | | \_\_\_\_\_\_\_ concerns agreements among different nations, or between citizens or corporations of different nations. | | | | | | | | B |
| A. | | National environmental law | | B. | | International environmental law | |
| C. | | Country’s law | | D. | | Soft law | |
|  | | \_\_\_\_\_\_\_international law generally refers to agreements or principles that are directly enforceable by a national or international body. | | | | | | | | A |
| A. | | Hard | | B. | | Soft | |
| C. | | UN’s | | D. | | Pakistan’s | |
|  | | \_\_\_\_\_\_\_\_is a plan or statement of intentions- either written or stated – about a course of action or inaction intended to accomplish some end. | | | | | | | | A |
| A. | | Policy | | B. | | Policy cycle | |
| C. | | Environmental Management System | | D. | | Law | |
|  | | NATIONAL CONSERVATION STRATEGY was launched in \_\_\_\_\_\_\_ | | | | | | | | B |
| A. | | 1999 | | B. | | 1992 | |
| C. | | 2000 | | D. | | 1993 | |
|  | | NATIONAL ENVIRONMENT POLICY aims to develop framework for conservation of \_\_\_\_\_\_\_\_ resources. | | | | | | | | D |
| A. | | Water | | B. | | Soil | |
| C. | | Environmental | | D. | | Natural | |
|  | | National Sanitation Policy was established in \_\_\_\_\_\_ | | | | | | | | D |
| A. | | 2000 | | B. | | 2008 | |
| C. | | 2007 | | D. | | 2006 | |
|  | | Provide access to safe and sustainable drinking water supply to the entire population of Pakistan by 2025, is one of the objective of\_\_\_\_\_\_\_\_\_\_\_. | | | | | | | | B |
| A. | | National Water Policy | | B. | | National Drinking Water Policy | |
| C. | | SDG 6 | | D. | | National Sanitation Policy | |
|  | | \_\_\_\_\_\_\_\_\_\_ aims at restoration, development, conservation and sustainable management of forests and allied natural resources to ensure sustainability of ecosystem functions, services and benefits for present and future generations of Pakistan. | | | | | | | | D |
| A. | | National Conservation Policy | | B. | | World Forest and Rangeland Policy | |
| C. | | National Forest Act | | D. | | National Forest Policy | |
|  | | Environmental policy consists of mainly \_\_\_\_\_ interrelated stages that form a cycle. | | | | | | | | C |
| A. | | 6 | | B. | | 5 | |
| C. | | 4 | | D. | | 3 | |
|  | | The role of \_\_\_\_\_\_\_ is to promote community development in a way that would harmonize the spiritual and material needs and interests. | | | | | | | | A |
| A. | | Environmental education | | B. | | Policy development | |
| C. | | Business education | | D. | | Environmental auditing | |
|  | | SDGs of the UNs have been set within \_\_\_\_\_ agenda for sustainable development. | | | | | | | | C |
| A. | | 2025 | | B. | | 2020 | |
| C. | | 2030 | | D. | | 2050 | |
|  | | Air pollution with \_\_\_\_\_\_\_is an environmental problem in Pakistan, which mainly occurs during September to December months. | | | | | | | | A |
| A. | | Smog | | B. | | Dust | |
| C. | | Looms | | D. | | Brick Kilns | |
|  | | Land degradation and erosion is fundamentally linked to \_\_\_\_\_\_\_. | | | | | | | | B |
| A. | | Water availability | | B. | | Deforestation | |
| C. | | Drought | | D. | | Natural resource management | |
|  | | Environmental resources management aims to ensure that \_\_\_\_\_\_ are protected and maintained for equitable use by future human generations. | | | | | | | | A |
| A. | | Ecosystem services | | B. | | Ecosystem functions | |
| C. | | Land resources | | D. | | Water resources | |
|  | | Acid rain is caused by the release of \_\_\_\_\_\_\_\_ into the atmosphere. | | | | | | | | A |
| A. | | Oxides of S and N | | B. | | Carbon dioxide | |
| C. | | Hydrocarbons | | D. | | Ozone + sulfuric acid | |
|  | | Global warming is mainly a result of disruption to the \_\_\_\_\_\_\_\_\_\_\_\_\_ cycle. | | | | | | | | B |
| A. | | Water | | B. | | Carbon | |
| C. | | Oxygen | | D. | | Sulfur | |
|  | | Decomposition of biochar is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | | | | | | | B |
| A. | | Very Rapid | | B. | | Slow | |
| C. | | Rapid | | D. | | Gradual | |
|  | | Generally, CO2 concentration is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in atmosphere. | | | | | | | | A |
| A. | | Increasing | | B. | | Decreasing | |
| C. | | Stable | | D. | | Constant | |
|  | | Lead (Pb) can be determined by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | | | | | | | B |
| A. | | HPLC | | B. | | Atomic absorption spectrophotometer | |
| C. | | Flame photometer | | D. | | Ion chromatograph | |
|  | | Arsenic can be determined by \_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | | | A |
| A. | | Hydride generation AAS | | B. | | AAS | |
| C. | | HPLC | | D. | | Gas Chromatograph | |
|  | | Conversion of organic-N to inorganic-N is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | | | | | | | A |
| A. | | Mineralization | | B. | | Immobilization | |
| C. | | Denitrification | | D. | | Assimilation | |
|  | | Which soil holds more water? | | | | | | | | B |
| A. | | Sandy | | B. | | Clayey | |
| C. | | Loamy | | D. | | A and B both soils | |
|  | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a community of different species that interact with each other and their environment? | | | | | | | | A |
| A. | | Habitat | | B. | | Ecosystem | |
| C. | | Biosphere | | D. | | Population | |
|  | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can fix nitrogen in their nodules. | | | | | | | | C |
| A. | | Rice | | B. | | Wheat | |
| C. | | Gram | | D. | | Fungi | |
|  | | Deforestation generally decreases: | | | | | | | | C |
| A. | | Global warming | | B. | | Soil erosion | |
| C. | | Rainfall | | D. | | Drought | |
|  | | Phytoextraction is a strategy/process that uses plants to \_\_\_\_\_\_\_\_\_\_\_ metals. | | | | | | | | C |
| A. | | Stabilize | | B. | | Transform | |
| C. | | Extract | | D. | | Volatilize | |
|  | | Biostimulation is addition of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ during bioremediation process. | | | | | | | | C |
| A. | | Microbes | | B. | | Oxygen | |
| C. | | Nutrients | | D. | | Methane | |
|  | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the most abundant greenhouse gas in the atmosphere. | | | | | | | | A |
| A. | | CO2 | | B. | | CH4 | |
| C. | | N2O | | D. | | CO | |
|  | | Total pore space in sandy soils will be ------------------- than clayey soils. | | | | | | | | B |
| A. | | Less | | B. | | Higher | |
| C. | | Equal | | D. | | None of above | |
|  | | \_\_\_\_\_\_\_\_\_\_ means any premises in which industrial activity is being undertaken. | | | | | | | | A |
| A. | | Factory | | B. | | Industry | |
| C. | | Farm | | D. | | Organization | |
|  | | Nestle water production and treatment plant is located in \_\_\_\_\_\_ | | | | | | | | D |
| A. | | Lahore | | B. | | Karachi | |
| C. | | Khanewal | | D. | | Kabirwala | |
|  | | TDS stands for\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | | | B |
| A. | | Total detectable solids | | B. | | Total dissolved solids | |
| C. | | Total diluted salts | | D. | | A and B both | |
|  | | Biochar has a very porous nature and improve\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in sandy soil | | | | | | | | D |
| A. | | Soil texture | | B. | | Soil formation | |
| C. | | Soil aggregation | | D. | | Soil structure | |
|  | | Leather tanneries discharge wastewater that mainly contains \_\_\_\_\_\_\_\_ heavy metal. | | | | | | | | C |
| A. | | Iron | | B. | | Arsenic | |
| C. | | Chromium | | D. | | Cadmium | |
|  | | ISO stands for \_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | | | A |
| A. | | International Organization for Standardization | | B. | | International Organization for Standards | |
| C. | | International Standard Organization | | D. | | International System Standard Organization | |
|  | | The standard ‘Environmental management systems*—*Requirements with guidance for use’ is represented by \_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | | | A |
| A. | | 14001 | | B. | | 14004 | |
| C. | | 14000 | | D. | | 15001 | |
|  | | Which of the following is the cause of Melanornia (skin cancer)? | | | | | | | | B |
| A. | | Acid rain | | B. | | Ozone depletion | |
| C. | | Allergens | | D. | | All of these | |
|  | | Composting provides a greater reduction in pathogen because of | | | | | | | | C |
| A. | | Low C:N | | B. | | High pH | |
| C. | | High Temp | | D. | | High Moisture | |
|  | | Eutrophication in lakes is due to: | | | | | | | | C |
| A. | | Heavy metals | | B. | | Organic pollutants | |
| C. | | Nutrients | | D. | | None of these | |
|  | | Bahawalpur is located in \_\_\_\_\_\_\_\_\_\_\_ of Punjab. | | | | | | | | B |
| A. | | North | | B. | | South | |
| C. | | South-west | | D. | | West | |
|  | | Placing a cover over contaminated material such as landfill waste or contaminated soil is called\_\_\_ | | | | | | | | A |
| A. | | Capping | | B. | | Excavation | |
| C. | | Landfilling | | D. | | Solidification | |
|  | | Nanomaterials size range from \_\_\_ to \_\_\_\_\_ | | | | | | | | A |
| A. | | 10-100 nm | | B. | | 1-5 nm | |
| C. | | <1000 nm | | D. | | >100 nm | |
|  | | Sorption kinetics defines removal of a solute from solution with \_\_\_\_\_\_\_ | | | | | | | | A |
| A. | | Time | | B. | | pH change | |
| C. | | Initial concentration change | | D. | | A and B both | |
|  | | Bioventing is a bioremediation technique in which microbes use \_\_\_\_\_\_\_\_ | | | | | | | | A |
| A. | | Gases | | B. | | Nutrients | |
| C. | | Sucrose | | D. | | Carbon | |
|  | | In isotherm models *R2* represents\_\_\_\_\_ | | | | | | | | B |
| A. | | Regression coefficient | | B. | | Coefficient of variation | |
| C. | | Change | | D. | | Correlation | |
|  | | Kd is known as \_\_\_\_\_\_\_\_\_ | | | | | | | | A |
| A. | | Distribution coefficient | | B. | | Kinetics coefficient | |
| C. | | Regression coefficient | | D. | | Isotherm coefficient | |
|  | | In water and salt, NaCl salt is known as \_\_\_\_\_\_\_\_\_\_\_ | | | | | | | | B |
| A. | | Solvent | | B. | | Solute | |
| C. | | Ion | | D. | | Mixture | |
|  | | Iron oxides minerals are \_\_\_\_\_\_ efficient to remove metal ions from water than clay minerals | | | | | | | | B |
| A. | | Less | | B. | | More | |
| C. | | Not | | D. | | Equally | |
| 66 | | Which of the following important functions interact in ecosystem carry out by microorganisms? | | | | | | | | D | |
| A. | | Contribution to the formation of organic matter | | B. | | Decomposing organic matter | |
| C. | | Modifying substrates and nutrients | | D. | | All the above | |
| 67 | | When different organisms within a population or community try to acquire the same resource and the same resource and tend to inhibit the other is called as which of the following? | | | | | | | | D | |
| A. | | Amensalism | | B. | | Mutualism | |
| C. | | Commensalism | | D. | | Competition | |
| 68 | | United Nations Climate Change conference “COP26” has held in: | | | | | | | | A | |
| A. | | Glasgow | | B. | | Birmingham | |
| C. | | Geneva | | D. | | Munich | |
| 69 | | Surface adherence is called | | | | | | | | A | |
| A. | | Adsorption | | B. | | Absorption | |
| C. | | Sorption | | D. | | None of these | |
| 70 | | When are nutrients converted into biomass during microbial activity is known as which one of the following? | | | | | | | | A | |
| A. | | Immobilization | | B. | | Synthesis | |
| C. | | Mineralization | | D. | | None of the above | |
| 71 | | Which one is not included in the major principle of ecosystem? | | | | | | | | B | |
| A. | | Nutrient movement | | B. | | Soil structure | |
| C. | | Energy flow | | D. | | None of the above | |
| 72 | | Which of the following statements are true about CNG -Compressed natural gas? | | | | | | | | C | |
| A. | | It is a polluting fuel | | B. | | It is a harmful fuel | |
| C. | | It is a clean fuel | | D. | | None of these | |
| 73 | | Which of the following is the cause of Melanornia (skin cancer)? | | | | | | | | B | |
| A. | | Acid rain | | B. | | Ozone depletion | |
| C. | | Allergens | | D. | | All of these | |
| 74 | | In -situ degradation of Pollutants has been used as a cost-effective alternative to | | | | | | | | A | |
| A. | | Incineration | | B. | | Rhizo-filtration | |
| C. | | Phytoremediation | | D. | | Phyto extraction | |
| 75 | | Which one from the following is not a composting stage? | | | | | | | | A | |
| A. | | Decomposition Stage | | B. | | High-Rate stage | |
| C. | | Thermophilic | | D. | | Curing Stage | |
| 76 | | Composting provides a greater reduction in pathogen because of | | | | | | | | C | |
| A. | | Low C:N | | B. | | High pH | |
| C. | | High Temp | | D. | | High Moisture | |
| 77 | | Which of the following gas destroys the chlorophyll present in the plant leaves? | | | | | | | | B | |
| A. | | SO3 | | B. | | SO2 | |
| C. | | H2S | | D. | | CO2 | |
| 78 | | Which of the following is not a waterborne disease? | | | | | | | | D | |
| A. | | Hepatitis | | B. | | Typhoid | |
| C. | | Cholera | | D. | | Measles | |
| 79 | | Which of the following device is used to measure atmospheric humidity? | | | | | | | | D | |
| A. | | Photometer | | B. | | Auxanometer | |
| C. | | Hydrometer | | D. | | Hygrometer | |
| 80 | | Which element is considered the largest source of world's commercial energy consumption? | | | | | | | | C | |
| A. | | Coal | | B. | | Natural gas | |
| C. | | Oil | | D. | | Nuclear | |
| 81 | | Depletion of the ozone layer is caused due to: | | | | | | | | C | |
| A. | | Ferrocene | | B. | | Fullerenes | |
| C. | | Freons | | D. | | Polyhalogens | |
| 82 | | The biodynamic preparations consist of selected plant and animal substances that undergo to enhance quality for farming systems | | | | | | | | D | |
| A. | | Fermentation | | B. | | Value addition | |
| C. | | Composting | | D. | | All above | |
| 83 | | Brackish water ecosystems are found in which of the following: | | | | | | | | B | |
| A. | | Streams | | B. | | Deltas | |
| C. | | Wetlands | | D. | | Coastal shallows | |
| 84 | | In reduced tillage vs conventional tillage, which practice usually results in greater amount of SOM | | | | | | | | A | |
| A. | | Reduced decomposition rate | | B. | | High decomposition rate | |
| C. | | High soil disturbances | | D. | | None of above | |
| 85 | | Regarding the SOM build-up, which one of the statements is incorrect | | | | | | | | D | |
| A. | | Physical disturbance and mixing of soil | | B. | | Through decomposition and distribution of plant residues in soil profile | |
| C. | | Exposure of soil aggregates to disruptive forces | | D. | | None of above | |
| 86 | | Which of the following is the anticipated effect of Global warming? | | | | | | | | D | |
| A. | | Rising sea level | | B. | | Changing precipitation | |
| C. | | Expanding deserts | | D. | | All of these | |
| 87 | | Which one of the following components of the soil helps to attach the ammonium ion to it’s surface | | | | | | | | A | |
| A. | | Clay | | B. | | Sand | |
| C. | | Minerals | | D. | | Silt | |
| 88 | | When was the term ‘Sustainable Development’ came into existence? | | | | | | | | C | |
| A. | | 1976 | | B. | | 1978 | |
| C. | | 1980 | | D. | | 1982 | |
| 89 | | Formation of organic matter and prevention of soil erosion can be enhanced by which one of the following practice? | | | | | | | | B | |
| A. | | Crop Rotation | | B. | | Reduced Tillage | |
| C. | | Ploughing | | D. | | Tillering | |
| 90 | | In flocculation process for removal of unwanted particulate waste matter, which of the following chemical is treated most? | | | | | | | | C | |
| A. | | Alum | | B. | | Lime | |
| C. | | Both (a) and (b) | | D. | | None of the above | |
| 91 | | Which one of the following forms of nitrogen is most suitable for use as nitrogen fertilizer in soil | | | | | | | | B | |
| A. | | Ammonium Chloride | | B. | | Ammonium Nitrate | |
| C. | | Ammonium Sulfate | | D. | | Potassium Nitrate | |
| 92 | | Disinfection of water during water purification is usually done with application of which of the following chemical | | | | | | | | C | |
| A. | | Chlorine | | B. | | Ozone | |
| C. | | Both (a) and (b) | | D. | | None of the above | |
| 93 | | The world’s biggest GHG emitter is | | | | | | | | B | |
| A. | | America | | B. | | China | |
| C. | | France | | D. | | India | |
| 94 | | Which of the following method is used for removal of suspended material from wastewater | | | | | | | | C | |
| A. | | Filtration | | B. | | Purification | |
| C. | | Sedimentation | | D. | | Settlement | |
| 95 | | The chemical breakdown of a compound into simpler compounds, often accomplished by microbial metabolism is termed as which one of the following? | | | | | | | | A | |
| A. | | Decomposition | | B. | | Respiration | |
| C. | | Mineralization | | D. | | None | |
| 96 | | Which one of the following genera fixed to the atmospheric nitrogen non-symbiotically? | | | | | | | | A | |
| A. | | Azotobacter | | B. | | Nitrobacter | |
| C. | | Bradyrhizobium | | D. | | Rhizobium | |
| 97 | | Which of the following nutrient source converts to the water system from oligotrophic to eutrophic condition? | | | | | | | | C | |
| A. | | Nitrogen (N) | | B. | | Phosphorus (P) | |
| C. | | Both (a) and (b) | | D. | | none of the above | |
| 98 | | By process of composting, which one of the following materials is used as bulking agent in treatment of waste | | | | | | | | B | |
| A. | | Charcoal | | B. | | Manure | |
| C. | | Vegetable peel off | | D. | | Wastewater | |
| 99 | | The Pakistan Environmental Protection Act 1997 was passed by the National Assembly of Pakistan on | | | | | | | | D | |
| A. | | June 5, 1997 | | B. | | July 17, 1997 | |
| C. | | August 8, 1997 | | D. | | September 3, 1997 | |
| 100 | | Minamata disease was first detected in: | | | | | | | | B | |
| A. | | Mexico | | B. | | Japan | |
| C. | | Brazil | | D. | | USA | |
| 101 | | Which one of the following types of denitrifications returns nitrogen atoms to the atmosphere by reducing nitrate to nitrogen gas? | | | | | | | | C | |
| A. | | Assimilative denitrification | | B. | | both a and b | |
| C. | | Dissimilative denitrification | | D. | | none of the above | |
| 102 | | Loss of nitrogen from soil is caused by which one of the following processes. | | | | | | | | C | |
| A. | | Ammonification | | B. | | immobilization | |
| C. | | Denitrification | | D. | | nitrification | |
| 103 | | Humus is the major insoluble portion of the organic substances in soil, produced by one of the following processes of living matter | | | | | | | | A | |
| A. | | Decomposition | | B. | | Immobilization | |
| C. | | Dissimilation | | D. | | Neutralization | |
| 104 | | For production of Biogas, which one of the following is the best waste material? | | | | | | | | A | |
| A. | | Agricultural Waste | | B. | | Food Industry Waste | |
| C. | | Household waste | | D. | | Wastewater Sludge | |
| 105 | | A type of plastic that is biodegradable has been in the news lately. The ingredient that makes it biodegradable is: | | | | | | | | D | |
| A. | | Vegetable oil | | B. | | Petroleum | |
| C. | | Leather | | D. | | Cornstarch | |
| 106 | | The conversion of an organic form of an element to an inorganic form as a result of microbial decomposition is called as which one of the following | | | | | | | | C | |
| A. | | Decomposition | | B. | | Respiration | |
| C. | | Mineralization | | D. | | None of the above | |
| 107 | | Which one of the following components is subjected to first degradation during organic matter decomposition? | | | | | | | | A | |
| A. | | Carbohydrate | | B. | | Fatty acids | |
| C. | | Cellulose | | D. | | Lignin | |
| 108 | | Which one of the following processes is important because higher plants can assimilate nitrate much more rapidly than they can ammonium? | | | | | | | | B | |
| A. | | Ammonification | | B. | | Nitrification | |
| C. | | Denitrification | | D. | | None of the above | |
| 109 | | The year declared by the UN as International Year of Forests: | | | | | | | | D | |
| A. | | 2008 | | B. | | 2009 | |
| C. | | 2010 | | D. | | 2011 | |
| 110 | | Soil microorganisms influence above-ground ecosystem by contributing to except which one of the following | | | | | | | | D | |
| A. | | Plant nutrition and soil health | | B. | | Soil structure | |
| C. | | Soil fertility | | D. | | Soil texture | |
| 111 | | High concentration of Calcium carbonate can be found in biochar prepared from | | | | | | | | B | |
| A. | | Rice Husk | | B. | | Paper and Pulp | |
| C. | | Wheat Straw | | D. | | Wood | |
| 112 | | The carbon dioxide makes approximately? | | | | | | | | A | |
| A. | | 83% of total greenhouse gas emitted | | B. | | 85% of total greenhouse gas emitted | |
| C. | | 81% of total greenhouse gas emitted | | D. | | 90% of total greenhouse gas emitted | |
| 113 | | The biochar addition to soil reduces the emission of? | | | | | | | | A | |
| A. | | Methane, nitrous oxide and carbon dioxide | | B. | | Carbon dioxide only | |
| C. | | Methane only | | D. | | CH4 and CO2 | |
| 114 | | The temperature of fast pyrolysis is? | | | | | | | | B | |
| A. | | 500 °C | | B. | | 550 °C | |
| C. | | 450 °C | | D. | | 400 °C | |
| 115 | | During thermal decomposition, calcium, magnesium, and phosphorus vaporize at? | | | | | | | | A | |
| A. | | ) High temp. | | B. | | Intermediate temp. | |
| C. | | Low temp. | | D. | | None of these | |
| 116 | | In soil, most of the nitrogen exists in complex organic form that must be mineralized in to ----------------------- prior to uptake by plants. | | | | | | | | B | |
| A. | | NH4 and N2O | | B. | | NH4 and NO3 | |
| C. | | NH4 and NH3 | | D. | | NH4 and N2 | |
| 117 | | The availability of phosphorus in different soil types is very much dependent on? | | | | | | | | B | |
| A. | | Ca & Mg | | B. | | pH | |
| C. | | Fe & Al | | D. | | application of P fertilizers | |
| 118 | | Biomass with high lignin content will give | | | | | | | | B | |
| A. | | Low biochar yield | | B. | | High biochar yield | |
| C. | | Intermediate biochar yield | | D. | | None | |
| 119 | | How many times methane gas is more potent as compared to carbon dioxide? | | | | | | | | A | |
| A. | | 21 times | | B. | | 25 times | |
| C. | | 19 times | | D. | | 35 times | |
| 120 | | In alkaline soils, P solubility is primarily regulated by its interaction with | | | | | | | | D | |
| A. | | Al | | B. | | Al & Fe | |
| C. | | Fe & S | | D. | | Ca | |
| 121 | | Biochar has a very porous nature and improve\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in sandy soil | | | | | | | | D | |
| A. | | Soil texture | | B. | | Soil formation | |
| C. | | Soil aggregation | | D. | | Soil structure | |
| 122 | | Sodic soils generally have a poor physical condition, what is most likely reason? | | | | | | | | C | |
| A. | | Low organic matter content | | A. | | Low organic matter content | |
| C. | | Dispersal of the Na saturated soil colloids | | C. | | Dispersal of the Na saturated soil colloids | |
| 123 | | Which of the silicate clays would likely have the highest level of potassium in the crystal structure? | | | | | | | | D | |
| A. | | Kaolinite | | B. | | Chlorite | |
| C. | | Smectite | | D. | | Fine-grained mica | |
| 124 | | Runoff from agriculturally active fields and feedlots is an example of which of the following source of pollution | | | | | | | | B | |
| A. | | Point source pollution | | B. | | Non-point source pollution | |
| C. | | Mass source pollution | | D. | | None of the Above | |
| 125 | | During Bio-remediation, microbial growth and activity are typically stimulated with the addition of \_\_\_\_\_\_\_\_\_ | | | | | | | | C | |
| A. | | Nutrients and Carbon | | B. | | Nutrients and Phosphorus | |
| C. | | Nutrients and Oxygen | | D. | | Nutrients and Hydrogen | |
| 126 | | In-situ degradation of Pollutants has been used as a cost effective alternative to \_\_\_\_\_\_ | | | | | | | | A | |
| A. | | Incineration | | B. | | Phytoremediation | |
| C. | | Rhizo-filtration | | D. | | Phyto extraction | |
| 127 | | less than\_\_\_\_\_\_ of municipal solid waste is recycled | | | | | | | | C | |
| A. | | 10 % | | B. | | 12 % | |
| C. | | 15 % | | D. | | 18 % | |
| 128 | | Composting provides a greater reduction in pathogen because of\_\_\_\_\_\_\_\_\_ | | | | | | | | C | |
| A. | | Low C:N | | B. | | High pH | |
| C. | | High Temp | | D. | | High Moisture | |
| 129 | | Cation exchange capacity of biochar ----------------- with the passage of time. | | | | | | | | B | |
| A. | | Decreases | | B. | | Increases | |
| C. | | Remains constant | | D. | | None of these | |
| 130 | | Overall, ash contents in the biochar ---------------- by increasing the pyrolytic temperature. | | | | | | | | A | |
| A. | | Decreases | | B. | | Increases | |
| C. | | Remains constant | | D. | | None of these | |
|  | | | | | | | | | | | | |

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| --- | --- | --- | --- | --- | --- |
| 131 | Backyard waste collection is much less common, but is used: | | | | A |
| A. | In wealthier areas | B. | In backward areas |
| C. | In urban areas of developing countries | D. | Both b & c |
| 132 | Activities in which materials are identified as no longer being of value and are either thrown out are termed as: | | | | C |
| A. | Waste collection | B. | Waste generation |
| C. | Waste processing | D. | Waste management |
| 133 | During waste collection when the waste stream is either very dense or very wet, the vehicle which works poorly is termed as: | | | | C |
| A. | Mule powered | B. | Compactor trucks |
| C. | Non-compactor trucks | D. | Hand Pull |
| 134 | Containers like baskets or paper bags allow wastes to have contact with air, which promotes | | | | B |
| A. | Anaerobic odors formation | B. | Decomposition of organic wastes |
| C. | H2S formation | D. | Both a & c |
| 135 | Where the distance from one stop to the next is too short the waste collection model used for waste collection is termed as: | | | | C |
| A. | Single driver-collector | B. | Interchangeable driver and crew |
| C. | Driver separate from collection vehicle | D. | None of these |
| 136 | The part of CO released into the atmosphere from automobiles is: | | | | C |
| A. | 60% | B. | 75% |
| C. | 80% | D. | 90% |
| 137 | Sulphur dioxide released into atmosphere from burning of fossil fuels is: | | | | C |
| A. | 45% | B. | 60% |
| C. | 75% | D. | 90% |
| 138 | Pesticides are the pollutants which are of origin: | | | | C |
| A. | Natural | B. | Industrial |
| C. | Manmade | D. | Microbial |
| 139 | Bio-pollutants have detrimental effects on aquatic life and are included as: | | | | B |
| A. | Physical factor | B. | Biological factor |
| C. | Chemical factor | D. | None of these |
| 140 | Addition of organic matter in water increases the concentration of | | | | D |
| A. | O2 | B. | CO2 |
| C. | NO2 | D. | CO |
| 141 | Eutrophication is an increase in the [concentration](http://en.wikipedia.org/wiki/Concentration) of: | | | | B |
| A. | Biological Nutrients | B. | Chemical [nutrients](http://en.wikipedia.org/wiki/Nutrient) |
| C. | Organic nutrients | D. | None of these |
| 142 | Health Risk Assessment is carried out to examine the effects of an agent on: | | | | B |
| A. | Ecosystems | B. | Humans |
| C. | Forests | D. | None of these |
| 143 | The loss of green pigment chlorophyll is called: | | | | B |
| A. | Necrosis | B. | Chlorosis |
| C. | Bifacial necrosis | D. | None of these |
| 144 | The solid waste of woolen waste items to degenerate/decompose takes | | | | A |
| A. | 18 months | B. | 15 months |
| C. | 12 months | D. | 9 months |
| 145 | Becomes a legal owner of the waste once it is collected or put out for its collection | | | | B |
| A. | NGOs | B. | Local Govt. |
| C. | National Govt. | D. | CBOs |
| 146 | Larger containers encourage waste generators to keep waste before setting them out for | | | | A |
| A. | Longer time | B. | Short time |
| C. | Several weeks | D. | One week |
| 147 | Reducing waste through less packaging and use of reusable utensils is termed as | | | | B |
| A. | Recycling | B. | Source reduction |
| C. | Combustion | D. | Land filling |
| 148 | A sanitary landfill after closing requires to be monitored for | | | | C |
| A. | 10 years | B. | 20 years |
| C. | 30 years | D. | 40 years |
| 149 | During waste incineration the volume of solid waste is reduced up to | | | | D |
| A. | 30% | B. | 60% |
| C. | 80% | D. | 90% |
| 150 | The type of incinerator designed to recover energy from burning process is | | | | C |
| A. | Modular | B. | Mass Burn |
| C. | Refuse derived fuel | D. | None of these |
| 151 | The decentralized composting on the village and community scale has capacity to compost waste | | | | A |
| A. | 2-50 tons/day | B. | 20-50 tons/day |
| C. | 40-50 tons/day | D. | 10-50 tons/day |
| 152 | During landfilling the wastes are buried in the ground under conditions imposed by | | | | D |
| A. | NGOs | B. | Local Govt. |
| C. | National Govt. | D. | Environ. Protection Agency |
| 153 | During waste collection when streets are crowded: | | | | C |
| A. | Compactor trucks work very well | B. | Non-compactor trucks work very well |
| C. | Muscle powered vehicle | D. | Both a & b |
| 154 | Collection of source-separated waste materials for recycling has | | | | A |
| A. | High collection costs | B. | High processing costs |
| C. | Less homeowner involvement | D. | Both a & c |
| 155 | Breakdown of one hemoglobin molecule in animals causes air pollution due the production of | | | | A |
| A. | One molecule of CO2 | B. | One molecule of SO2 |
| C. | One molecule of NO2 | D. | None of these |
| 156 | Killing of tissues on lower & upper surface of leaf due to air pollution is known as | | | | D |
| A. | Chlorosis | B. | Necrosis |
| C. | Epinasty | D. | Bifacial necrosis |
| 157 | Is only pollutant gas which is colored. | | | | C |
| A. | CO2 | B. | SO2 |
| C. | H2O | D. | NO2 |
| 158 | The soil application of Municipal waste is favored by | | | | A |
| A. | Farmers & Local Govt. | B. | Only Farmers |
| C. | Only Local Govt. | D. | NGOs |
| 159 | 80% pesticides in vegetables can be removed through | | | | B |
| A. | Washing with alcohol | B. | Washing with Water |
| C. | Cleaning with cloth | D. | Cleaning with tissue paper |
| 160 | Leather tanneries discharge wastewater that mainly contains \_\_\_\_\_\_\_\_ heavy metal. | | | | C |
| A. | Iron | B. | Arsenic |
| C. | Chromium | D. | Cadmium |
| 161 | Langmuir sorption isotherm explains \_\_\_\_\_\_\_\_\_\_\_\_ sorption of ions on solid surface. | | | | A |
| A. | Homogeneous | B. | Heterogeneous |
| C. | Uniform | D. | Non-uniform |
| 162 | \_\_\_\_\_\_\_international law generally refers to agreements or principles that are directly enforceable by a national or international body. | | | | A |
| A. | Hard | B. | Soft |
| C. | UN’s | D. | Pakistan’s |
| 163 | National Sanitation Policy was established in \_\_\_\_\_\_ | | | | D |
| A. | 2000 | B. | 2008 |
| C. | 2007 | D. | 2006 |
| 164 | Environmental policy consists of mainly \_\_\_\_\_ interrelated stages that form a cycle. | | | | C |
| A. | 6 | B. | 5 |
| C. | 4 | D. | 3 |
| 165 | Land degradation and erosion is fundamentally linked to \_\_\_\_\_\_\_. | | | | B |
| A. | Water availability | B. | Deforestation |
| C. | Drought | D. | Natural resource management |
| 166 | Lead (Pb) can be determined by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | | | B |
| A. | HPLC | B. | Atomic absorption spectrophotometer |
| C. | Flame photometer | D. | Ion chromatograph |
| 167 | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the most abundant greenhouse gas in the atmosphere. | | | | A |
| A. | CO2 | B. | CH4 |
| C. | N2O | D. | CO |
| 168 | Placing a cover over contaminated material such as landfill waste or contaminated soil is called\_\_\_ | | | | A |
| A. | Capping | B. | Excavation |
| C. | Landfilling | D. | Solidification |
| 169 | Conversion of organic-N to inorganic-N is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | | | D |
| A. | Assimilation | B. | Immobilization |
| C. | Denitrification | D. | Mineralization |
| 170 | United Nations Climate Change conference “COP26” has held in: | | | | C |
| A. | Birmingham | B. | Geneva |
| C. | Glasgow | D. | Munich |
| 171 | Which of the following is not a waterborne disease? | | | | D |
| A. | Hepatitis | B. | Typhoid |
| C. | Cholera | D. | Measles |
| 172 | Depletion of the ozone layer is caused due to: | | | | C |
| A. | Ferrocene | B. | Fullerenes |
| C. | Freons | D. | Polyhalogens |
| 173 | Which of the following is the anticipated effect of Global warming? | | | | D |
| A. | Rising sea level | B. | Changing precipitation |
| C. | Expanding deserts | D. | All of these |
| 174 | The world’s biggest GHG emitter is | | | | B |
| A. | America | B. | China |
| C. | France | D. | India |
| 175 | The Pakistan Environmental Protection Act 1997 was passed by the National Assembly of Pakistan on | | | | D |
| A. | June 5, 1997 | B. | July 17, 1997 |
| C. | August 8, 1997 | D. | September 3, 1997 |
| 176 | For production of Biogas, which one of the following is the best waste material? | | | | A |
| A. | Agricultural Waste | B. | Food Industry Waste |
| C. | Household waste | D. | Wastewater Sludge |
| 177 | Minamata disease was first detected in: | | | | B |
| A. | Mexico | B. | Japan |
| C. | Brazil | D. | USA |
| 178 | The year declared by the UN as International Year of Forests: | | | | C |
| A. | 2009 | B. | 2010 |
| C. | 2011 | D. | 2012 |
| 179 | High concentration of Calcium carbonate can be found in biochar prepared from | | | | B |
| A. | Rice Husk | B. | Paper and Pulp |
| C. | Wheat Straw | D. | Wood |
| 180 | In alkaline soils, P solubility is primarily regulated by its interaction with | | | | D |
| A. | Al | B. | Al & Fe |
| C. | Fe & S | D. | Ca |
| 181 | Greenhouse effect of water vapors is | | | | C |
| A. | 4-9% | B. | 9-26% |
| C. | 36-70% | D. | None of these |
| 182 | The CFCs are used as: | | | | D |
| A. | Insulators | B. | Aerosol propellants |
| C. | Refrigerants | D. | All of these |
| 183 | Which human activity can decrease the oxygen levels present in the atmosphere? | | | | A |
| A. | Deforestation | B. | Animal hunting |
| C. | Mining | D. | Both (a) and (c) |
| 184 | Brackish water ecosystems are found in which of the following: | | | | B |
| A. | Streams | B. | Deltas |
| C. | Wetlands | D. | Coastal shallows |
| 185 | Which of the following Environmentalists first gave the concept of Biodiversity ‘hotspots’? | | | | B |
| A. | Gaylord Nelson | B. | Norman Myers |
| C. | John Muir | D. | Julia “Butterfly” Hill |
| 186 | The number of biosphere reserves in Pakistan recognized as a part of world network of biospheres | | | | C |
| A. | 5 | B. | 6 |
| C. | 7 | D. | 8 |
| 187 | Deforestation generally decreases: | | | | C |
| A. | Global warming | B. | Soil erosion |
| C. | Rainfall | D. | Drought |
| 188 | The most serious environmental pollution from a nuclear reactor is: | | | | A |
| A. | Thermal pollution | B. | Radioactivity |
| C. | Particulate formation | D. | Noise pollution |
| 189 | Cation exchange capacity of biochar ----------------- with the passage of time. | | | | B |
| A. | Decreases | B. | Increases |
| C. | Remains constant | D. | None of these |
| 190 | Torrey Canyon is famous for: | | | | D |
| A. | Gulf of War | B. | Industries |
| C. | Electric Potential | D. | Oil spillage |
| 191 | Carbon monoxide is a pollutant because it | | | | B |
| A. | reacts with oxygen | B. | reacts with hemoglobin |
| C. | inhibits glycolysis | D. | inactivates nervous system |
| 192 | The coldest region of the atmosphere is | | | | A |
| A. | Mesosphere | B. | Troposphere |
| C. | Stratosphere | D. | Thermosphere |
| 193 | Which of the following techniques is/are used in controlling water pollution? | | | | D |
| A. | Reverse osmosis | B. | Ion exchange process |
| C. | Adsorption process | D. | All of these |
| 194 | When nutrients are converted into biomass during microbial activity is known as which one of the following? | | | | A |
| A. | Immobilization | B. | Synthesis |
| C. | Mineralization | D. | None of the above |
| 195 | Which of the following device is used to measure atmospheric humidity? | | | | D |
| A. | Photometer | B. | Auxanometer |
| C. | Hydrometer | D. | Hygrometer |
|  | | | | | |

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| --- | --- | --- | --- | --- | --- | --- |
| 196 | Faisalabad is an industrial city and which one of the following is the biggest issue ----- | | | | | A |
| A. | Air pollution | B. | ground water pollution | |
| C. | Soil pollution | D. | Surface water pollution | |
| 197 | A chemical that is resistant to degradation and takes years to break down is called\_\_\_\_\_\_\_\_\_ | | | | | B |
| A. | Carcinogenic | B. | Persistent | |
| C. | Hazardous | D. | Pollutant | |
| 198 | Pollution prevention is usually \_\_\_\_\_\_\_\_\_\_\_\_\_\_ compared to pollution cleanup. | | | | | B |
| A. | Expensive | B. | Cheaper | |
| C. | Dangerous | D. | Not possible | |
| 199 | The absorption of infrared energy by CO2 and other gases warms the lower atmosphere in a phenomenon known as | | | | | A |
| A. | Greenhouse effect | B. | Radiation effect | |
| C. | Climatic effect | D. | None of these | |
| 200 | Public water supplies are often evaluated for biological contamination by testing for the presence of ­­\_\_\_\_\_\_\_\_ | | | | | B |
| A. | Heavy metals | B. | E-Coli | |
| C. | Pesticides | D. | Microorganisms | |
| 201 | Producer, consumer and decomposer are three main pillars of | | | | | B |
| A. | Marketing | B. | Ecosystem | |
| C. | Urbanization | D. | None of these | |
| 202 | Asthma is caused mainly by \_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | C |
| A. | Soil pollution | B. | Water pollution | |
| C. | Air pollution | D. | Viral infection | |
| 203 | Microbial degradation of a pollutant is higher under \_\_\_\_\_\_\_\_\_\_\_\_\_ conditions | | | | | A |
| A. | Aerobic conditions | B. | Anaerobic conditions | |
| C. | Saline conditions | D. | High acidic conditions | |
| 204 | Acid rain is caused by the release of \_\_\_\_\_\_\_\_ into the atmosphere | | | | | A |
| A. | Oxides of S and N | B. | Carbon dioxide | |
| C. | Hydrocarbons | D. | Organic acids | |
| 205 | Global warming is a result of disruption to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cycle | | | | | B |
| A. | Water | B. | Carbon | |
| C. | Nitrogen | D. | Sulfur | |
| 206 | Zn is mostly deficient in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | A |
| A. | Rice | B. | Wheat | |
| C. | Maize | D. | Cotton | |
| 207 | Which of the following is the most preferred method of reducing landfill disposal of waste? | | | | | D |
| A. | Composting | B. | Materials recovery | |
| C. | Source separation | D. | Source reduction | |
| 208 | In planar (TLC/paper) chromatography, the maximum limit where solvent can reach is called | | | | | A |
| A. | Solvent front | B. | Base line | |
| C. | Solvent development | D. | Rf value | |
| 209 | Adhesion to an extremely thin layer of molecules to the surfaces of solid bodies and liquids with which they contact is known as: | | | | | C |
| A. | Absorption | B. | Contact | |
| C. | Adsorption | D. | Scrubbing | |
| 210 | An example of non-point pollution is | | | | | B |
| A. | An oil spill | B. | Agricultural runoff | |
| C. | Trash from a landfill | D. | None of them | |
| 211 | -------------- is the biggest source of green house gases production worldwide | | | | | A |
| A. | Burning fossil fuels | B. | Industry | |
| C. | Deforestation | D. | Agriculture | |
| 212 | Municipal and industrial discharge pipes are examples of | | | | | C |
| A. | Nonpoint sources of pollution | B. | Nonpoint sources of pollution | |
| C. | Point sources of pollution | D. | None of the above | |
| 213 | Which of the following greenhouse gasses has the greatest heat-trapping ability per molecule? | | | | | A |
| A. | Chlorofluorocarbon | B. | Methane | |
| C. | Carbon dioxide | D. | Nitrous oxide | |
| 214 | For preparation of standard curve | | | | | C |
| A. | The minimum standard should be 0.1 ppm and maximum should be 10 ppm | B. | The minimum standard should be 1 % and maximum should be 100 % | |
| C. | Select minimum and maximum concentration of standards keeping in view the upper and lower limit of expected concentration range of the samples | D. | Depends upon the total number of samples | |
| 215 | On this day in 1972, the ‘Stockholm Conference on Human Environment’ was held in Sweden. Since then the ‘World Environment Day’ is celebrated on this day. State the date | | | | | B |
| A. | 8th March | B. | | 5th June |
| C. | 22nd May | D. | | 8th October |
| 216 | Chlorine has been widely used for\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | B |
| A. | Bleaching | B. | As a disinfectant | |
| C. | For biofouling prevention | D. | In all these | |
| 217 | Bacteria which use light as source of energy and carbon dioxide as source of carbon are called | | | | | A |
| A. | Photoautotrophs | B. | Photoheterotrophs | |
| C. | Chemoheterotrophs | D. | Chemoautotrophs | |
| 218 | A metabolic process in which an organism converts a carbohydrate into alcohol or acid is called | | | | | C |
| A. | Fermentation | B. | Anaerobic digestion | |
| C. | Both A and B | D. | None of these | |
| 219 | The process of killing infective bacteria in water is called | | | | | B |
| A. | Sterilization | B. | Disinfection | |
| C. | Sedimentation | D. | Aeration | |
| 220 | EMS stands for \_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | B |
| A. | Environmental Module Sets | B. | Environmental Management System | |
| C. | Eco-monitoring system | D. | Efficient Monitoring System | |
| 221 | In Pakistani soils, which one is not a common fate of NH4 | | | | | D |
| A. | Lost by soil erosion | B. | Used by plants | |
| C. | Volatilization as NH3 | D. | Leaching | |
| 222 | Buffer solutions are required to maintain | | | | | A |
| A. | PH | B. | Turgor pressure | |
| C. | Redox potential | D. | None of these | |
| 223 | In electrophoresis DNA moves towards the pole having | | | | | A |
| A. | Positive charge | B. | Negative charge | |
| C. | Neutral charge | D. | None of these | |
| 224 | Autoclave is used for | | | | | A |
| A. | Sterilization | B. | Storage of chemicals | |
| C. | For microbial inoculation | D. | For all these purposes | |
| 225 | ISO stands for \_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | B |
| A. | International Organization for Standardization | B. | International Standard Organization | |
| C. | International Organization for Standards | D. | International Organization for Subjects | |
| 226 | Which of the following is putrescible waste | | | | | D |
| A. | Oil | B. | Plastics | |
| C. | Pesticides | D. | None of these | |
| 227 | Environmental issues are also linked with | | | | | D |
| A. | Social issues | B. | Political issues | |
| C. | Industrial growth | D. | All of these | |
| 228 | Atmosphere has a maximum concentration of | | | | | B |
| A. | Phosphorus | B. | Nitrogen | |
| C. | Oxygen | D. | Phosphorus | |
| 229 | ------------------ are involved both in mineralization and immobilization of phosphorus in soil | | | | | D |
| A. | Bacteria | B. | Fungus | |
| C. | Mycorrhizae | D. | All are involved in one way or other | |
| 230 | The process of killing organism in water is called | | | | | B |
| A. | Coagulation | B. | Disinfection | |
| C. | Sedimentation | D. | Aeration | |
| 231 | Environmental science studies all aspects of the environment | | | | | A |
| A. | In an interdisciplinary way | B. | In isolation | |
| C. | Only consider biological sciences | D. | Does not consider physical sciences | |
| 232 | We alter the carbon cycle by | | | | | D |
| A. | Adding excess CO2 to the atmosphere | B. | Burning of fossil fuels | |
| C. | Clearing vegetation faster than it is replaced | D. | All these | |
| 233 | Volatilization of NH4 to ammonia gas (NH3) is favored by | | | | | C |
| A. | Saline conditions | B. | Anaerobic conditions | |
| C. | Dry and high temperature | D. | Low soil pH | |
| 234 | -----------is the example of inorganic pesticide | | | | | B |
| A. | Lindane | B. | Borax | |
| C. | DDT | D. | Chlordane | |
| 235 | Eutrophication causes \_\_\_\_\_\_\_\_\_in O2 concentration in water body | | | | | B |
| A. | No effect | B. | decrease | |
| C. | Increase | D. | None of above | |
| 236 | Acid rain is caused by the release of \_\_\_\_\_\_\_\_ into the atmosphere. | | | | | A |
| A. | Oxides of S and N | B. | Oxides of Pb | |
| C. | Carbon dioxide | D. | Chlorofluorocarbon | |
| 237 | Major gas produced by burning of fossil fuels is | | | | | D |
| A. | Nitrogen | B. | Ammonia | |
| C. | Oxygen | D. | Carbon dioxide | |
| 238 | Common extracting agent to remove water soluble heavy metal fraction is | | | | | B |
| A. | CaCO3 | B. | H2SO4 | |
| C. | H2O | D. | CH3COONa | |
| 239 | Smog is a mixture of | | | | | A |
| A. | Smoke and fog | B. | Soil and water | |
| C. | Dust particle and plant leaves | D. | Different gases | |
| 240 | Waste incinerators and battery manufacturing are source of | | | | | B |
| A. | Oxides of nitrogen | B. | Lead | |
| C. | Ozone | D. | Sulfur dioxide | |
| 241 | Methane (CH4), a potent greenhouse gas, which is produced by | | | | | A |
| A. | Anaerobic metabolisms | B. | Aerobic metabolisms | |
| C. | By industrial waste | D. | Burning of leaded petrol | |
| 242 | Example of oxidant used in chemical oxidation of organic contaminants | | | | | C |
| A. | H2O | B. | H2O2 | |
| C. | H2SO4 | D. | NaCl | |
| 243 | In solid waste management process a principle where the polluting party pays for the impact caused to the environment is termed as: \_\_\_\_\_\_\_\_. | | | | | B |
| A. | Extended producer responsibility | B. | Polluter pays principle | |
| C. | Polluter benefits | D. | None of them | |
| 244 | During waste collection when streets are crowded: | | | | | B |
| A. | Compactor trucks work very well | B. | Non-compactor trucks work very well | |
| C. | The ability of the vehicle to travel is minimized | D. | None of them | |
| 245 | CFCs (Chlorofluorocarbons) were used as: | | | | | B |
| A. | Antioxidant | B. | Refrigerant | |
| C. | Oxidizing agent | D. | None of these | |
| 246 | Renewable resources can be replaced | | | | | A |
| A. | Within few human generations | B. | Within a moment | |
| C. | Cannot be replaced | D. | Only after millions of years | |
| 247 | The safer option among these for the disposal of pollutant wastes is | | | | | C |
| A. | Incineration | B. | Ocean | |
| C. | Soil | D. | Atmosphere | |
| 248 | Which one is building block of both animal and plant tissues | | | | | C |
| A. | Nitrogen | B. | Sulfur | |
| C. | Carbon | D. | Silica | |
| 249 | Pesticides are the pollutants which are of origin: | | | | | C |
| A. | Natural | B. | Microbial | |
| C. | Manmade | D. | Rock phosphate | |
| 250 | Health Risk Assessment is carried out to examine the effects of an agent on: | | | | | A |
| A. | Ecosystems | B. | Humans | |
| C. | Forests | D. | None of these | |
| 251 | The loss of green pigment chlorophyll is called: | | | | | B |
| A. | Necrosis | B. | Chlorosis | |
| C. | Bifacial necrosis | D. | Exudates | |
| 252 | Which one is easily biodegradable waste? | | | | | C |
| A. | Necrosis | B. | Plastic | |
| C. | Eggshell | D. | Glass | |
| 253 | Global distribution of POPs is due to | | | | | A |
| A. | Diffused contamination | B. | Water run off | |
| C. | Mass flow | D. | Leaching | |
| 254 | Reducing waste through less packaging and use of reusable utensils is termed as | | | | | B |
| A. | Recycling | B. | Source reduction | |
| C. | Combustion | D. | Land filling | |
| 255 | The type of incinerator designed to recover energy from burning process is | | | | | B |
| A. | Modular | B. | Mass Burn | |
| C. | Refuse derived fuel | D. | None of them | |
| 256 | ----------is the major agricultural source of CH4 emission into the atmosphere | | | | | D |
| A. | Puddled rice | B. | Aerobic rice | |
| C. | Sugarcane | D. | Rainfed brassica | |
| 257 | Eutrophication is due to increase in | | | | | B |
| A. | Biological nutrients | B. | Inorganic nutrients | |
| C. | Organic nutrients | D. | None of these | |
| 258 | Biostimulation is addition of \_\_\_\_\_\_\_\_\_\_\_\_\_ to stimulate indigenous microorganisms. | | | | | D |
| A. | Water | B. | Gasses | |
| C. | Growth regulators | D. | Nutrients | |
| 259 | A substance that promotes the rate of reaction is called \_\_\_\_\_\_\_\_\_ | | | | | A |
| A. | Catalyst | B. | Stimulant | |
| C. | Enhancer | D. | Regulator | |
| 300 | In chemical safety measures, MSDS stands for? | | | | | C |
| A. | Mission Specific Data Set | B. | Manufacturer's Safety Data Sheet | |
| C. | Material safety data sheet | D. | Mean specific data set | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 301 | Lack of specific chemical/nutrient from food is called | | | | A |
| A. | Malnutrition | B. | Undernutrition |
| C. | Starving | D. | All have same meanings |
| 302 | When Biological Oxygen Demand (BOD) is high | | | | A |
| A. | The oxygen content of water may become too low to support life in water | B. | The oxygen content of water become high to support life in water |
| C. | Water life is not disturbed by fluctuation in BOD | D. | Carbon dioxide becomes short to support photosynthesis for aquatic plants |
| 303 | Unit of oxidation-reduction potential is | | | | A |
| A. | Volt or millivolts | B. | Watts or milliwatts |
| C. | Number of electrons gained | D. | Number of electrons lost |
| 304 | The absorption of infrared energy by CO2 and other gases warms the lower atmosphere in a phenomenon known as | | | | A |
| A. | Greenhouse effect | B. | Radiation effect |
| C. | Climatic effect | D. | None of these |
| 305 | The lower atmosphere is a mixture of dominantly by molecules of three important gases | | | | A |
| A. | Oxygen, nitrogen and carbon dioxide | B. | Oxygen, nitrogen and hydrogen |
| C. | Oxygen, nitrogen and chlorine | D. | These three gases are not dominant in the lower atmosphere |
| 306 | Producer, consumer and decomposer are three main pillars of | | | | B |
| A. | Marketing | B. | Ecosystem |
| C. | Urbanization | D. | None of these |
| 307 | About 75% of the peat lands in the world are found in | | | | A |
| A. | Canada and northern Russia | B. | Africa |
| C. | Asia | D. | Australia and New Zealand |
| 308 | Rising level of atmospheric ----------------------is causing ocean water to become acidified | | | | C |
| A. | Nitrogen | B. | Oxygen |
| C. | Carbon dioxide | D. | pH |
| 309 | Aluminum cans, plastic packaging and some synthetic chemicals | | | | C |
| A. | Can be easily biodegraded | B. | Can be source of nutrient after decomposition |
| C. | Almost nonbiodegradable | D. | Support ecosystem and biodiversity |
| 310 | Every kilogram of fossil carbon burned produces ---------------------that enters the atmosphere | | | | B |
| A. | One kilograms of CO2 | B. | 3.7 kilograms of CO2 |
| C. | Half kilograms of CO2 | D. | 10 kilograms of CO2 |
| 311 | Two molar solution of CaCl2 in terms of normality will be | | | | A |
| A. | 4 Normal (4N) | B. | 2 Normal (2N) |
| C. | 1 Normal (1N) | D. | Cannot be correlated |
| 312 | Partial validation of analytical technique is required where there is change in | | | | D |
| A. | Analytical methodology | B. | Harvesting biological fluid |
| C. | Matrix within species | D. | All these |
| 313 | In planar (TLC/paper) chromatography, the maximum limit where solvent can reach is called | | | | A |
| A. | Solvent front | B. | Base line |
| C. | Solvent development | D. | Rf value |
| 314 | In planar chromatography, aniline phthalate is used for detection and measurement of | | | | C |
| A. | Lipids | B. | Amino acids |
| C. | Carbohydrates | D. | Proteins |
| 315 | In water HOH angle of---------------------- result in an asymmetrical arrangement | | | | B |
| A. | 501° | B. | 105° |
| C. | 101° | D. | 115° |
| 316 | Antibodies are proteins produced in the body in response to invading substance, while antigen is a | | | | A |
| A. | Substance that a body is trying to fight off | B. | Only virus |
| C. | Only bacteria | D. | None of these |
| 317 | The process of getting genetic information (identification) by DNA sequencing using NCBI library is called | | | | A |
| A. | Blasting | B. | Genome tagging |
| C. | Genetic calculations | D. | Genetic engineering |
| 318 | Symbol of biohazard at the entry of a laboratory shows that | | | | B |
| A. | No one can enter in the laboratory | B. | Only authorized persons having information about the laboratory safety can enter in the laboratory |
| C. | Everyone can enter in the laboratory | D. | None of these |
| 319 | For preparation of standard curve | | | | C |
| A. | The minimum standard should be 0.1 ppm and maximum should be 10 ppm | B. | The minimum standard should be 1 % and maximum should be 100 % |
| C. | Select minimum and maximum concentration of standards keeping in view the upper and lower limit of expected concentration range of the samples | D. | Depends upon the total number of samples |
| 320 | Movement of bacteria towards a chemical attractant or away from a chemical repellent is called | | | | C |
| A. | Flagella movement | B. | Pili movement |
| C. | Chemotaxis | D. | Chemotrophy |
| 321 | Flame Ionization Detector is used in | | | | B |
| A. | HPLC | B. | GC |
| C. | Spectro Photometer | D. | In all these |
| 322 | Bacteria which use light as source of energy and carbon dioxide as source of carbon are called | | | | A |
| A. | Photoautotrophs | B. | Photoheterotrophs |
| C. | Chemoheterotrophs | D. | Chemoautotrophs |
| 323 | To ensure pulse free solvent flow, HPLC should have | | | | D |
| A. | One pump | B. | Two pumps |
| C. | More than one pumps | D. | Pulse free solvent could be achieved in all options mentioned here |
| 324 | In electrophoresis comb is used | | | | B |
| A. | To draw straight lines on gel | B. | To make wells for loading DNA samples on gel |
| C. | To act as cathode in gel | D. | To act as anode in gel |
| 325 | In an analytical analysis LLOQ stands for | | | | B |
| A. | Least level of quality | B. | Lower limit of quantification |
| C. | Instrumental error | D. | None of these |
| 326 | In Pakistani soils, which one is not a common fate of NH4 | | | | D |
| A. | Lost by soil erosion | B. | Used by plants |
| C. | Volatilization as NH3 | D. | Leaching |
| 327 | Buffer solutions are required to maintain | | | | A |
| A. | PH | B. | Turgor pressure |
| C. | Redox potential | D. | None of these |
| 328 | In electrophoresis DNA moves towards the pole having | | | | A |
| A. | Positive charge | B. | Negative charge |
| C. | Neutral charge | D. | None of these |
| 329 | Autoclave is used for | | | | A |
| A. | Sterilization | B. | Storage of chemicals |
| C. | For microbial inoculation | D. | For all these purposes |
| 330 | Two moles of K2HPO4 will have weight | | | | A |
| A. | 348 grams | B. | 174 grams |
| C. | 136 grams | D. | 87 grams |
| 331 | A system can be technically defined as | | | | A |
| A. | A set of components functioning together as a whole | B. | A set of components functioning independently |
| C. | Different components of the environment | D. | None of these |
| 332 | Environmental issues are also linked with | | | | D |
| A. | Social issues | B. | Political issues |
| C. | Industrial growth | D. | All these |
| 333 | Atmosphere has a maximum concentration of | | | | B |
| A. | Phosphorus | B. | Nitrogen |
| C. | Oxygen | D. | Phosphorus |
| 334 | ------------------ are involved both in mineralization and immobilization of phosphorus in soil | | | | D |
| A. | Bacteria | B. | Fungus |
| C. | Mycorrhizae | D. | All are involved in one way or other |
| 335 | Lithosphere has maximum concentration of | | | | A |
| A. | Phosphorus | B. | Nitrogen |
| C. | Oxygen | D. | Phosphorus |
| 336 | Environmental science studies all aspects of the environment | | | | A |
| A. | In an interdisciplinary way | B. | In isolation |
| C. | Only consider biological sciences | D. | Does not consider physical sciences |
| 337 | We alter the carbon cycle by | | | | D |
| A. | Adding excess CO2 to the atmosphere | B. | Burning of fossil fuels |
| C. | Clearing vegetation faster than it is replaced | D. | All these |
| 338 | Volatilization of NH4 to ammonia gas (NH3) is favored by | | | | C |
| A. | Saline conditions | B. | Anaerobic conditions |
| C. | Dry and high temperature | D. | None of these |
| 339 | O3 stands for | | | | B |
| A. | Ozonation | B. | Ozone |
| C. | Tri-atomic oxygen | D. | None |
| 340 | Eutrophication causes \_\_\_\_\_\_\_\_\_in O2 concentration in water body | | | | B |
| A. | No effect | B. | decrease |
| C. | Increase | D. | None of above |
| 341 | Acid rain is caused by the release of \_\_\_\_\_\_\_\_ into the atmosphere. | | | | A |
| A. | Oxides of S and N | B. | Oxides of Pb |
| C. | Carbon dioxide | D. | Chlorofluorocarbon |
| 342 | Major gas produced by burning of fossil fuels is | | | | D |
| A. | Nitrogen | B. | Ammonia |
| C. | Oxygen | D. | Carbon dioxide |
| 343 | Solid particles and liquid droplets suspended in the air we breathe is referred as | | | | C |
| A. | Particulate material | B. | Particulates |
| C. | Both Particulate material or Particulates | D. | None of them |
| 344 | Smog is a mixture of | | | | A |
| A. | Smoke and fog | B. | Soil and water |
| C. | Dust particle and plant leaves | D. | Different gases |
| 345 | Waste incinerators and battery manufacturing are source of | | | | B |
| A. | Oxides of nitrogen | B. | Lead |
| C. | Ozone | D. | Sulfur dioxide |
| 346 | Methane (CH4), a potent greenhouse gas, which is produced by | | | | A |
| A. | Anaerobic metabolisms | B. | Aerobic metabolisms |
| C. | By industrial waste | D. | Burning of leaded petrol |
| 347 | Contribute significantly to CH4 emissions | | | | B |
| A. | Incineration | B. | Landfills |
| C. | Phytoremediation | D. | None of them |
| 348 | Hyperaccumulators are plants that \_\_\_\_\_\_\_\_. | | | | C |
| A. | Can survive on metal-contaminated soil by growing without taking in too much of the metal in question | B. | Are extremely sensitive to the toxic effect of certain heavy metals and therefore act as an early warning system to detect contamination |
| C. | Take up extremely high amounts of certain metals without being harmed | D. | Accumulate dense root mats just above the layer of polluted soil |
| 349 | Enzymes needed for fundamental cellular processes are generally maintained at constant levels in the cell, and their production is------------------------ | | | | A |
| A. | Unaffected by concentrations of substrate or products | B. | Dependent on concentrations of substrate or products |
| C. | Dependent only on substrate | D. | Controlled by product level |
| 350 | Enzymes that catalyze the degradation of polymeric substances added to the soil are | | | | B |
| A. | Necessarily intracellular | B. | Necessarily extracellular |
| C. | Polymeric substance in soil cannot be degraded by enzymes | D. | Catabolic enzymes |
| 351 | Renewable resources can be replaced | | | | A |
| A. | Within few human generations | B. | Within a moment |
| C. | Cannot be replaced | D. | Only after millions of years |
| 352 | The function of growth promoting rhizobacteria is to | | | | C |
| A. | Inhibit competing bacteria by producing antibiotics | B. | Enhance mycorrhizal activity |
| C. | Produce biologically active substance | D. | Promote plant growth by producing chemical signals |
| 353 | Which one is building block of both animal and plant tissues | | | | C |
| A. | Nitrogen | B. | Sulfur |
| C. | Carbon | D. | Silica |
| 354 | Methanotrophic bacteria | | | | A |
| A. | Oxidize methane gas | B. | Produce methane gas |
| C. | Utilize methane as the electron source for reduction processes | D. | Are responsible for the greenhouse effect |
| 355 | Roots of environmental problems lie in the values of | | | | A |
| A. | Individuals who comprise society | B. | Interaction of the societies |
| C. | Relations among the country | D. | None of these |
| 356 | Ozone layer is found in | | | | B |
| A. | Lithosphere | B. | Atmosphere |
| C. | Biosphere | D. | Stratosphere |
| 357 | Which one is easily biodegradable waste? | | | | C |
| A. | Polythene | B. | Plastic |
| C. | Eggshell | D. | Glass |
| 358 | Remediation of pollutants in the close vicinity of plants roots is called | | | | B |
| A. | Soil remediation | B. | Rhizoremediation |
| C. | Composting | D. | All these |
| 359 | Composting is a process of ------------------ | | | | A |
| A. | Biological decomposition and stabilization of organic matter | B. | Biological decay |
| C. | Simply decomposition | D. | None of these |
| 360 | In composting ------------------- phase is very important | | | | A |
| A. | Mesophilic | B. | Hydrophilic |
| C. | Pedophilic | D. | All these |
| 361 | PCR stands for Polymerase Chain \_\_\_\_\_\_\_\_\_ | | | | D |
| A. | Residues | B. | Resistance |
| C. | Recycling | D. | Reaction |
| 362 | Commensalism is a \_\_\_\_\_\_\_\_\_\_ interaction. | | | | B |
| A. | Neutral | B. | Positive |
| C. | Negative | D. | Passive |
| 363 | Biostimulation is addition of \_\_\_\_\_\_\_\_\_\_\_\_\_ to stimulate indigenous microorganisms. | | | | D |
| A. | Water | B. | Gasses |
| C. | Growth regulators | D. | Nutrients |
| 364 | A substance that promotes the rate of reaction is called \_\_\_\_\_\_\_\_\_ | | | | A |
| A. | Catalyst | B. | Stimulant |
| C. | Enhancer | D. | Regulator |
| 365 | It is an inert gas in the environment | | | | C |
| A. | N2O | B. | CO2 |
| C. | Ar | D. | CH4 |

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| --- | --- | --- | --- | --- | --- |
| 366 | ………………. is the major source responsible for climate change? | | | | B |
| A. | Agriculture | B. | Fossil fuel |
| C. | Industries | D. | Transport |
| 367 | The floating plants are also called ----------------. | | | | B |
| A. | Zooplanktons | B. | Phytoplankton |
| C. | Xerophytes | D. | Halophyte |
| 368 | Pollution with identifiable source can be categorized as ------------ source of pollution | | | | A |
| A. | Point source | B. | Non-point source |
| C. | Both | D. | None |
| 369 | The term for all the species of living organisms in a region or ecosystem at a specific time is called ---- | | | | A |
| A. | Biodiversity | B. | Species |
| C. | Variety | D. | None of the above |
| 370 | . Acid rain is due to …………… | | | | B |
| A. | SO2 in air | B. | NO2 in air |
| C. | Both a and B | D. | None of these |
| 371 | The organism which directly feed on the green plants are called as …………….. | | | | B |
| A. | Omnivorous | B. | Herbivorous |
| C. | Both A and B | D. | Carnivorous |
| 372 | Nitrous oxide emissions from fertilizer applications are approximately ……………………... | | | | B |
| A. | 53% | B. | 80% |
| C. | 20% | D. | 40% |
| 373 | Which of the following disease is not caused by noise pollution ……………….? | | | | D |
| A. | Irritation | B. | Deafness |
| C. | Hypertension | D. | Cholera |
| 374 | Which one of the followings is not a greenhouse gas? | | | | A |
| A. | Ozone | B. | Methane |
| C. | Chlorofluorocarbon | D. | Carbon dioxide |
| 375 | ……………….is a constitutional part of chlorophyll. | | | | A |
| A. | Mg | B. | Na |
| C. | N | D. | Fe |
| 376 | Complete destruction of forest cover due to anthropogenic activities is called as………… | | | | D |
| A. | Afforestation | B. | Land use change |
| C. | Forestation | D. | Deforestation |
| 377 | Lead (Pb) can be determined by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | D |
| A. | HPLC | B. | Atomic absorption spectrophotometer |
| C. | ICP | D. | Both B and C |
| 378 | Soil organic matter will decompose quickly when C:N ratio of that material would be ……………….. | | | | A |
| A. | Narrow | B. | Broad |
| C. | High | D. | None of the above |
| 379 | -------------- crop is the major contributor of methane gas in the environment. | | | | A |
| A. | Rice | B. | Maize |
| C. | sugarcane | D. | wheat |
| 380 | Chlorine has been widely used for\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | B |
| A. | Bleaching | B. | disinfection |
| C. | biofouling prevention | D. | All of the above |
| 381 | The resistance of a pesticide molecule against the microbial degradation is referred as ……………………. | | | | A |
| A. | Persistence | B. | Decomposition |
| C. | Immobilization | D. | Transformation |
| 382 | The average weather conditions in given place over longer period of time are called | | | | B |
| A. | Season | B. | Climate |
| C. | Atmosphere | D. | Weather |
| 383 | Soil organic matter (SOM) decreases with tillage practices due to ………………….. | | | | D |
| A. | High aeration | B. | exposure of SOM |
| C. | oPOM release | D. | All of the above |
| 384 | The heat of sun is not stronger in the area located…………. | | | | B |
| A. | Near the North Pole | B. | Near the equator |
| C. | Far from equator | D. | Near the South Pole |
| 385 | …………….metal is found in the soils near to motorways which mostly sourced from the resistance between the tyres and roads. | | | | A |
| A. | Cd | B. | Fe |
| C. | Pb | D. | Cu |
| 386 | EMS stands for \_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | B |
| A. | Environmental Module Sets | B. | Environmental Management System |
| C. | Eco-Monitoring System | D. | None |
| 387 | Eutrophication increases with the increase in the concentration of…………………… in the water bodies | | | | C |
| A. | Nitrogen | B. | Phosphorus |
| C. | Both N and P | D. | BOD |
| 388 | Which one of the following plant nutrients naturally comes from the air? | | | | A |
| A. | Carbon | B. | Potassium |
| C. | Phosphorus | D. | Copper |
| 389 | In the air, the amount of water vapour is classified as | | | | B |
| A. | Precipitation | B. | Humidity |
| C. | wind | D. | None of these |
| 390 | Tanneries are the major contributor of …………….. in sewage water | | | | A |
| A. | Cr | B. | Cd |
| C. | Ni | D. | Pb |
| 391 | Which of the following is (are) the anticipated effect(s) of Global warming? | | | | D |
| A. | Rising sea levels | B. | Changing precipitation |
| C. | Expansion of deserts | D. | All of the above |
| 392 | The example of secondary pollutants in the environment is……………….. | | | | C |
| A. | Carbon dioxide | B. | Smoke |
| C. | Smog | D. | None |
| 393 | Mineral identification can be assessed with …………… | | | | A |
| A. | X-ray diffraction | B. | Flam photometer |
| C. | Spectrophotometer | D. | ICP-MS |
| 394 | ………………climatic region receives rainfall < 250 mm annually. | | | | A |
| A. | Arid | B. | Humid |
| C. | Semi-arid | D. | None |
| 395 | Degradation of marble buildings by means of acid rains is called as ………… | | | | B |
| A. | Rain damage | B. | Stone cancer |
| C. | Dehydration | D. | Distruction |
| 396 | The temperature decreases with increasing …………. | | | | A |
| A. | Altitude | B. | Latitude |
| C. | Longitude | D. | None |
| 397 | ………………… is the type of remediation in which we grow for the remediation of contaminated soils | | | | A |
| A. | Inhibit competing bacteria by producing antibiotics | B. | Enhance mycorrhizal activity. |
| C. | Produce biologically active substance. | D. | Promote plant growth by producing chemical signals |
| 398 | Which of the following is not a greenhouse gas? | | | | D |
| A. | Water vapor | B. | Carbon dioxide |
| C. | Methane | D. | Ethane |
| 399 | \_\_\_\_\_\_\_\_\_\_\_\_\_ is the form of nitrogen that is leached. | | | | A |
| A. | NO3 | B. | NO2 |
| C. | NH4 | D. | none of these |
| 400 | Which of the following types of sources of energy do not produce carbon dioxide? | | | | D |
| A. | Wind energy | B. | Geothermal energy |
| C. | Hydroelectric energy | D. | All of the above |
| 401 | Organic compounds consist of | | | | B |
| A. | C,N,P | B. | C,H,O |
| C. | C,K,P | D. | N,P,K |
| 402 | Anthropogenic source of environmental contamination is related to……… | | | | C |
| A. | Mining activities | B. | Animal activities |
| C. | Human activities | D. | Natural activities |
| 403 | Biostimulation is addition of \_\_\_\_\_\_\_\_\_\_\_\_\_ to stimulate indigenous microorganisms. | | | | D |
| A. | Water | B. | Gasses |
| C. | Growth regulators | D. | Nutrients |
| 404 | CFCs (Chlorofluorocarbons) are used as. | | | | B |
| A. | Antioxidant | B. | Refrigerant |
| C. | Oxidizing agent | D. | None of these |
| 405 | Major gases contributing in acid rain are | | | | C |
| A. | NOx | B. | SOX |
| C. | Both A&B | D. | None of these |
| 406 | The Ozone layer lies in | | | | B |
| A. | Troposphere | B. | Stratosphere |
| C. | Ionosphere | D. | Mesosphere |
| 407 | The underground water is a part of ……………………. | | | | C |
| A. | Troposphere | B. | Lithosphere |
| C. | Hydrosphere | D. | Atmosphere |
| 408 | Conversion of NH4 to NO3 is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | B |
| A. | Ammonification | B. | Nitrification |
| C. | Mineralization | D | Immobilization |
| 409 | Greenhouse gases in the atmosphere make the Earth warmer because they \_\_\_\_\_\_\_\_\_\_ some of the heat that radiates away from Earth’s surface. | | | | B |
| A. | destroy | B. | trap |
| C. | evaporate | D. | conduct |
| 410 | Algal bloom in water causes……………….in the environment | | | | A |
| A. | Eutrophication | B. | Air pollution |
| C. | Glomal warming | D. | Ozone depletion |
| 411 | Heavy metals are categorized as …………. Pollutants | | | | B |
| A. | Organic | B. | Inorganic |
| C. | Biological | D. | None |
| 412 | Following is (are) the important Kyoto mechanism(s) | | | | C |
| A. | Emission trading | B. | Clean Development Mechanism |
| C. | Both a and b | D. | None of the above |
| 413 | Global atmospheric temperatures are likely to be increased due to: | | | | A |
| A. | Burning of fossil fuel | B. | Water pollution |
| C. | Soil erosion | D. | None of the above |
| 414 | A climate model is a representation of the physical, chemical and \_\_\_\_\_ processes that affect the climate system. | | | | B |
| A. | Biochemical | B. | Biological |
| C. | Biotic | D. | None of the above |
| 415 | ------------------is the major cause of global warming | | | | B |
| A. | Water pollution | B. | Air pollution |
| C. | Soil pollution | D. | None |
| 416 | Chlorofluorocarbons (CFCs) remain in the stratosphere because they are ----------------- in water | | | | B |
| A. | Soluble | B. | Insoluble |
| C. | Easily dissolvable | D. | None |
| 417 | The biological science that studies the relationship between living organisms and their environment is called -----------------. | | | | C |
| A. | Environmental Science | B. | Zoology |
| C. | Ecology | D. | Botany |
| 418 | Which of the following greenhouse gasses has the greatest heat-trapping ability per molecule? | | | | A |
| A. | Chlorofluorocarbon | B. | Methane |
| C. | CO2 | D. | None |
| 419 | Arsenic is ………………….. | | | | B |
| A. | Metal | B. | Metalloid |
| C. | Both A and B | D. | none |
| 420 | Density of heavy metals is \_\_\_\_\_\_\_\_\_\_\_\_ Mg m-3 | | | | A |
| A. | > 5 | B. | > 2 |
| C. | < 1 | D. | none of the above |
| 421 | Punjab Environmental Protection Act was established in \_\_\_\_\_\_\_\_\_\_\_: | | | | D |
| A. | 1900 | B. | 2019 |
| C. | 1947 | D. | 1997 |
| 422 | Suspended materials in water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the penetration of light | | | | B |
| A. | Increase | B. | Decrease |
| C. | Unaffected | D. | None |
| 423 | A resource that cannot be replaced quickly by natural processes is called ----------------. | | | | B |
| A. | Renewable | B. | None-renewable |
| C. | Both | D. | None |
| 424 | The primary risk of nitrate loaded drinking water is the development of ------------------. | | | | D |
| A. | Mathemoglobenemia | B. | Malaria |
| C. | Flue | D. | both a & c |
| 425 | A solution with above pH 7 is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ soil. | | | | B |
| A. | Acidic | B. | Alkaline |
| C. | Neutral | D. | Saltish |
| 426 | Which of the following is correct? | | | | A |
| A. | Arsenite is more toxic than arsenate | B. | Arsenite and arsenate, both are equally toxic |
| C. | Does not exist | D. | Arsenite and arsenate, both are equally none-toxic |
| 427 | Which fertilizer contains sulfur? | | | | D |
| A. | Urea | B. | Calcium ammonium nitrate |
| C. | Sodium nitrate | D. | Ammonium sulfate |
| 428 | The process of modifying the chemistry of pollutants by growing plants is known as ------ | | | | D |
| A. | Phyto-extraction | B. | Phyto-stabilization |
| C. | Rhizo-filtration | D. | Phyto-transformation |
| 429 | Phyto transformation is also called -----------------. | | | | A |
| A. | Phytodegradation | B. | Phytoextration |
| C. | Rhizofilteration | D. | none of the above |
| 430 | Following is (are) the cause(s) for CO2 emissions. | | | | D |
| A. | Fossil fuel burning | B. | Changes in land use |
| C. | Calcination of limestone for clinker production | D. | All of the above |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 431 | The Fine organic and inorganic particles suspended in the air is called | | | | C |
| A. | Particulate pollutant | B. | Gaseous pollutant |
| C. | Aerosol | D. | None of these |
| 432 | Carbon monoxide is a pollutant because | | | | B |
| A. | Composting | B. | Incinerations |
| C. | Segregation | D. | Sanitary land filling |
| 433 | Biogeochemical cycle includes | | | | B |
| A. | Nutrient cycling through abiotic components | B. | Nutrient cycling through biotic and abiotic components |
| C. | Nutrient cycling through biotic components | D. | None of the above |
| 434 | Which one of the following is an example of biomagnification? | | | | C |
| A. | The development of cancer in a person because they ingested a toxic pesticide | B. | The rate of intake of mercury in one shellfish exceeding the rate of removal |
| C. | A high concentration of microplastics in a secondary consumer in an ocean habitat | D. | The failure of an organism to reproduce successfully because they consumed a pollutant |
| 435 | The presence of high coliform counts in water indicates | | | | A |
| A. | Contamination by human wastes | B. | Phosphorus contamination |
| C. | Decreased biological oxygen demand | D. | Hydrocarbon contamination |
| 436 | The UN ‘Agenda 2030’ for Sustainable Development commonly known as SDGs consists of | | | | C |
| A. | 10 goals | B. | 12 goals |
| C. | 17 goals | D. | 14 goals |
| 437 | Which type of electricity-generating power plant releases radioactive as well as toxic materials such as lead and arsenic under normal operating conditions? | | | | A |
| A. | Nuclear | B. | Hydroelectric |
| C. | Coal-burning | D. | Geothermal |
| 438 | The best management option for ‘climate change’ disaster for developing countries like Pakistan? | | | | D |
| A. | Prevention | B. | Response |
| C. | Recovery | D. | Preparedness |
| 439 | WHO permissible levels for chloride, Ca and TDS in drinking water are | | | | A |
| A. | 200-250-1000 mg/L | B. | 250-200-1000 mg/L |
| C. | 250-75-1000 mg/L | D. | 200-400-1000 mg/L |
| 440 | The biodiversity is more at \_\_\_\_\_regions | | | | B |
| A. | Polar region | B. | Equator region |
| C. | Both A and B | D. | None of these |
| 441 | The theme of world Environment Day 2022 was | | | | C |
| A. | Ecosystem Restoration | B. | Restore Our Earth |
| C. | Only One Earth | D. | Invest in Our Planet |
| 442 | Dengue infection spread by a specific carrier named\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | B |
| A. | Culex Mosquito | B. | Aedes Mosquito |
| C. | Housefly | D. | Anopheles Mosquito |
| 443 | Which agreement have many countries signed that is supposed to fix greenhouse gas emissions? | | | | B |
| A. | Montreal Protocol | B. | Kyoto Protocol |
| C. | Greenhouse Gas Protocol | D. | None of the answers are correct |
| 444 | Per capita water availability in Pakistan is around\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | A |
| A. | < 1000 m3 | B. | < 2000 m3 |
| C. | > 2000 m3 | D. | 5500 m3 |
| 445 | What is a watershed? | | | | D |
| A. | Area of land that water flows across as it moves toward a larger water body | B. | Area of land from which water drains to a particular water body |
| C. | Moisture released from clouds in the form of rain, snow, hail, etc | D. | Both (A) and (B) |
| 446 | A disease caused by eating fish living in water containing mercury compounds, is called | | | | D |
| A. | Osteosclerosis | B. | Hashimoto’s oxidase |
| C. | Bright’s disease | D. | Minamata disease |
| 447 | Lichens are good bioindicators for | | | | C |
| A. | Environmental radiation | B. | Soil pollution |
| C. | Water and air pollution | D. | None of the above |
| 448 | The Federal Ministry of Climate Change was established in\_\_\_\_\_\_\_\_\_\_\_\_ | | | | A |
| A. | 2017 | B. | 2002 |
| C. | 2015 | D. | 2000 |
| 449 | Microbial degradation of a pollutant is higher under \_\_\_\_\_\_\_\_ conditions. | | | | A |
| A. | Aerobic condition | B. | Anerobic conditions |
| C. | Saline Conditions | D. | Acidic Conditions |
| 450 | Acid rain is caused by the release of \_\_\_\_\_\_\_\_ into the atmosphere | | | | A |
| A. | Oxides of S and N | B. | Excess of PMs in the air |
| C. | High level of CO2 | D. | All of these |
| 451 | Which is NOT true about non-renewable resources? | | | | C |
| A. | They are finite or non-sustainable | B. | Their exploitation and use will eventually lead to their exhaust. |
| C. | They cannot be stored for future use. | D. | These resources take millions of years to form |
| 452 | Which location in the atmosphere is ozone considered” bad” and harmful to a public’s health? | | | | A |
| A. | Troposphere | B. | Higher atmosphere |
| C. | Stratosphere | D. | Mesosphere |
| 453 | The book silent spring was written by | | | | C |
| A. | Madhav Gandgil | B. | Anil Agarwal |
| C. | Racihel Carson D. | D. | E.O Wilson |
| 454 | Tipping Bucket Ombrometer is device used for measuring the\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | C |
| A. | Temperature | B. | Sunshine |
| C. | Rainfall | D. | Relative humidity |
| 455 | Adhesion to an extremely thin layer of molecules to the surfaces of solid bodies and liquids with which they contact is known as: | | | | D |
| A. | Absorption | B. | Contact |
| C. | Adsorption | D. | Scrubbing |
| 456 | Public water supplies are often evaluated for biological contamination by testing for the presence of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | | | B |
| A. | Heavy metals | B. | E-Coli |
| C. | Organic matter | D. | TSS |
| 457 | A pollutant that is resistant to degradation and takes years to break down is called \_\_\_\_\_\_\_\_. | | | | A |
| A. | Persistent | B. | Carcinogenic |
| C. | Hazardous | D. | Toxic |
| 458 | An example of non-point pollution is | | | | D |
| A. | Sedimentation | B. | Agricultural runoff |
| C. | Pesticide | D. | All of these |
| 459 | Research Proposal is written for\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | D |
| A. | Research Funding | B. | Get Admission in PhD |
| C. | Improve Crop Yield | D. | Both A and B |
| 460 | Chlorine has been widely used for\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | C |
| A. | Bleaching | B. | Cleaning |
| C. | Disinfectant | D. | Decontamination |
| 461 | The three-way catalysts used in automobiles are an example of: | | | | B |
| A. | Scrubbing | B. | Catalytic reduction and oxidation |
| C. | Catalytic reduction | D. | Thermal decomposition |
| 462 | National conservation strategy Was Launched In \_\_\_\_\_\_\_ | | | | B |
| A. | 1999 | B. | 1992 |
| C. | 2000 | D. | 1993 |
| 463 | Leather tanneries discharge wastewater that mainly contains \_\_\_\_\_\_\_\_ heavy metal. | | | | D |
| A. | Arsenic | B. | Zinc |
| C. | Lead | D. | Nickle |
| 464 | PEPA 1997 was amended in 2012 after the \_\_\_\_ amendment in the constitution of Pakistan. | | | | C |
| A. | 15th | B. | 16th |
| C. | 18th | D. | 20th |
| 465 | Biostimulation is addition of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ during bioremediation process. | | | | A |
| A. | Nutrients | B. | Microbes |
| C. | Algae | D. | Oxygen |
| 466 | SDG which focused to deal with the climate action | | | | C |
| A. | 10th | B. | 17th |
| C. | 13th | D. | None of these |
| 467 | Wastewater is preferably used by the farmers for irrigation of crops due to | | | | A |
| A. | Nutrients | B. | Organic matter |
| C. | Heavy metals | D. | Salts |
| 468 | \_\_\_\_\_\_\_\_\_\_is the major agricultural source of CH4 emission into the atmosphere | | | | A |
| A. | Lowland rice | B. | Wetlands |
| C. | Upland Rice | D. | All of these |
| 469 | Which of the following conditions indicate the impact of global warming? | | | | A |
| A. | Melting of glaciers | B. | Change in weather conditions |
| C. | Lower of sea levels | D. | All of these |
| 470 | Soil Erosion is totally due to | | | | B |
| A. | Anthopogenic Activity | B. | Both A and C |
| C. | Natural Processes | D. | None of these0 |
| 471 | The 2022 United Nations Climate Change Conference, more commonly referred to as COP27 will held in 2022 at | | | | A |
| A. | Egypt | B. | New York |
| C. | Berlin | D. | Paris |
| 472 | One of the consequences of deforestation will be decrease in \_\_\_\_\_ | | | | D |
| A. | Soil Erosion | B. | Desertification |
| C. | Soil sedimentation | D. | rainfall |
| 473 | Most hazardous metal pollutant of automobile exhausts is | | | | C |
| A. | Copper | B. | Nickle |
| C. | Lead | D. | Mercury |
| 474 | Photochemical smog pollution does not contain | | | | D |
| A. | PAN | B. | Nitrogen dioxide |
| C. | Ozone | D. | Carbon dioxide |
| 475 | Which of the following greenhouse gasses has the greatest heat-trapping ability per molecule? | | | | A |
| A. | CFC | B. | CO2 |
| C. | CH4 | D. | Nitrous oxide |
| 476 | Bioventing is a bioremediation technique in which microbes use \_\_\_\_\_\_\_\_ | | | | B |
| A. | Carbon | B. | Gases |
| C. | Nutrients | D. | Sucrose |
| 477 | Pollution prevention is usually \_\_\_\_\_\_\_\_\_\_\_\_\_\_ than pollution cleanup. | | | | C |
| A. | Cheaper | B. | Efficient |
| C. | Both A and B | D. | Dangerous |
| 478 | Which of the following is the most preferred method of reducing landfill disposal of inorganic waste? | | | | A |
| A. | Incineration | B. | Burning |
| C. | Scrubbing | D. | Composting |
| 479 | In your opinion, which is the most effective way to conserve the plant diversity of an area? | | | | B |
| A. | by tissue culture method | B. | by creating biosphere reserve |
| C. | by kitchen gardening | D. | by developing seed bank |
| 480 | What is the meaning of coral bleaching? | | | | D |
| A. | Whitening of coral or decline in zooxanthellae due to rise in sea temperature | B. | Decline in zooxanthellae due to rise in sea temperature |
| C. | Impacts of excessive sea trade on fishing Industry | D. | Both A and B |
| 481 | What is the carbon credit? | | | | A |
| A. | It is the difference between the carbon emission allowed and actually reduced emitted carbon | B. | It is the loan amount by IMF for reducing pollution |
| C. | It is loan given to poor people for buying Modern Stoves | D. | All of the above |
| 482 | Which one of the following does not promote stability of the ecosystem? | | | | D |
| A. | Balancing between production and consumption of each element in the ecosystem. | B. | Balance between input and output of energy |
| C. | Normal functioning of different biochemical cycles. | D. | Increase of human population |
| 483 | The loss of green pigment chlorophyll is called | | | | A |
| A. | Necrosis | B. | Chlorosis |
| C. | Bifacial necrosis | D. | None of them |
| 484 | Addition of organic matter in water increases the concentration of | | | | B |
| A. | O2 | B. | CO2 |
| C. | NH3 | D. | DO |
| 485 | Example of oxidant used in chemical oxidation of organic contaminants | | | | C |
| A. | H2O2 | B. | H2SO4 |
| C. | H2O | D. | NaCl |
| 486 | Particulate matter constitutes of | | | | B |
| A. | Carbon particles | B. | Dust, ash, salt particles |
| C. | Vehicular emissions | D. | None of the above |
| 487 | Volatile matter can be separated for proximate analysis by igniting at | | | | B |
| A. | 1450℃ | B. | 105℃ |
| C. | 550℃ | D. | None of these |
| 488 | Pesticides are the pollutants which are of origin: | | | | C |
| A. | Natural | B. | Microbial |
| C. | manmade | D. | None of these |
| 489 | Eutrophication is due to increase in | | | | B |
| A. | Biological nutrients | B. | Inorganic [nutrients](http://en.wikipedia.org/wiki/Nutrient) |
| C. | Organic nutrients | D. | None of these |
| 490 | Global distribution of POPs is due to | | | | A |
| A. | Diffused contamination | B. | Water run off |
| C. | Mass flow | D. | None of these |
| 491 | Anthropogenic source of environmental contamination is related to | | | | D |
| A. | Mining | B. | Agriculture |
| C. | Industrial | D. | All of these |
| 492 | TDS in drinking water according to WHO should be | | | | A |
| A. | <1000 mg/L | B. | >1000 mg/L |
| C. | 1500 mg/L | D. | 4000 mg/L |
| 493 | An important NGO involved in global environmental protection is | | | | B |
| A. | ICCP | B. | GreenPeace |
| C. | UNEP | D. | IMF |
| 494 | Total number of essential elements for plant growth are---------------------------. | | | | B |
| A. | 16 | B. | 17 |
| C. | 15 | D. | 18 |
| 495 | In saturated soils the pressure potential is \_------------------------ | | | | B |
| A. | Negative | B. | Positive |
| C. | Zero | D. | Bothe A and B |