CHEMISTRY MCQ BOOKLET

Grade 9 · Chapter 11 · Environmental Chemistry — Air

FBISE / National Book Foundation Model Textbook companion

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Independent MCQs on air composition, pollutants, greenhouse warming, acid rain, converters, and protection. Not copied from the book exercise. Total: 108 questions. Each item has four options, the correct letter, and a short explanation of why it is correct.

A. Important / Main Topics

1. Clean dry air is mostly:

(A) nitrogen with about one-fifth oxygen
(B) oxygen with a little nitrogen
(C) carbon dioxide with argon
(D) ozone with methane

Correct Answer: A

Explanation: Dry air is about 78% nitrogen and 21% oxygen, so nitrogen dominates.

2. The approximate volume percent of oxygen in dry air is:

(A) 78%
(B) 21%
(C) 0.93%
(D) 0.038%

Correct Answer: B

Explanation: Oxygen is the second-most abundant dry-air gas at about 21%.

3. Among the trace “other gases,” argon is listed near:

(A) 78%
(B) 21%
(C) 0.93%
(D) 4%

Correct Answer: C

Explanation: Argon is the main noble-gas remainder at about 0.93% by volume.

4. The dry-air table lists carbon dioxide near:

(A) 21%
(B) 0.93%
(C) 4%
(D) 0.038%

Correct Answer: D

Explanation: CO2 is a small but important greenhouse-gas fraction, about 0.038%.

5. The envelope of gases and water vapour around Earth is the:

(A) atmosphere
(B) hydrosphere only
(C) lithosphere
(D) mantle

Correct Answer: A

Explanation: Atmosphere names that surrounding gaseous envelope.

6. Tropical rainforest air may contain water vapour up to about:

(A) 0.038%
(B) 4%
(C) 0.93%

(D) 21%

Correct Answer: B

Explanation: Humidity varies; rainforest air can hold around 4% water vapour.

7. A pollutant is anything in air, water, or soil that:

(A) is always a noble gas
(B) must be oxygen
(C) has a harmful effect on some part of the environment
(D) is always colourless

Correct Answer: C

Explanation: Harm, not mere presence, defines a pollutant.

8. Sulphur in fossil fuels is released mainly as sulphur oxides when fuels are:

(A) dissolved only in distilled water
(B) frozen in polar ice
(C) converted to nitrogen
(D) burned in power plants, vehicles, and heaters

Correct Answer: D

Explanation: Sulphur in fossil fuels is released mainly as sulphur oxides when fuels are burned in power plants, vehicles, and heaters.

9. Sulphur dioxide is especially linked to:

(A) acid rain and haze
(B) only ozone-layer healing
(C) only photosynthesis
(D) only argon production

Correct Answer: A

Explanation: SOx dissolve and oxidise to acidic rain and can reduce visibility as haze.

10. SO2 is readily absorbed in the respiratory system and acts as a:

(A) nutrient for haemoglobin
(B) powerful irritant that can worsen asthma and bronchitis
(C) harmless noble gas
(D) source of vitamin D

Correct Answer: B

Explanation: SO2 is readily absorbed in the respiratory system and acts as a powerful irritant that can worsen asthma and bronchitis.

11. NOx in this chapter mainly means:

(A) only N2 and O2
(B) only NH3
(C) NO and NO2
(D) only N2O5 ice

Correct Answer: C

Explanation: Nitric oxide and nitrogen dioxide are grouped as NOx.

12. A major source of nitrogen oxides is:

(A) helium balloons
(B) only photosynthesis
(C) only distillation of water
(D) high-temperature combustion in car engines and power plants

Correct Answer: D

Explanation: A major source of nitrogen oxides is high-temperature combustion in car engines and power plants.

13. NOx are blamed for acid rain, photochemical smog, and:

(A) headaches and respiratory problems

(B) making air 78% argon
(C) only sweet smell of rain
(D) only cooling the core of Earth

Correct Answer: A

Explanation: They are toxic irritants as well as acid-rain precursors.

14. Carbon dioxide is treated as a major air-pollution concern mainly because of:

(A) being 78% of dry air
(B) its role in climate change and global warming
(C) being a reddish-brown gas
(D) killing haemoglobin instantly like CO

Correct Answer: B

Explanation: Carbon dioxide is treated as a major air-pollution concern mainly because of its role in climate change and global warming.

15. Human activities that raise CO2 include burning fossil fuels, industrial processes, and:

(A) planting extra forests only
(B) making more argon
(C) deforestation
(D) freezing methane

Correct Answer: C

Explanation: Fewer trees mean less CO2 uptake as well as extra emissions from land-use change.

16. Carbon monoxide forms when carbon fuels undergo:

(A) complete combustion in excess oxygen
(B) only photosynthesis
(C) only electrolysis of water
(D) incomplete combustion with insufficient oxygen

Correct Answer: D

Explanation: Limited O2 yields CO rather than CO2 — so "incomplete combustion with insufficient oxygen" is the matching option.

17. CO is dangerous because it is colourless and odourless and binds to:

(A) haemoglobin, forming carboxyhaemoglobin
(B) chlorophyll only
(C) cellulose only
(D) argon atoms

Correct Answer: A

Explanation: CO is dangerous because it is colourless and odourless and binds to haemoglobin, forming carboxyhaemoglobin.

18. Particulates include soot, smoke, and dust that, if inhaled deeply, raise risk of:

(A) only stronger bones
(B) respiratory problems and cancer
(C) only higher argon
(D) only sweeter rain

Correct Answer: B

Explanation: Fine particles penetrate lungs — so "respiratory problems and cancer" is the matching option.

19. Methane sources include decaying vegetation, landfills, wetlands, rice fields, and:

(A) only helium wells
(B) only catalytic converters
(C) digestive gases from ruminant livestock
(D) only N95 masks

Correct Answer: C

Explanation: Cows, goats, and sheep release CH4 from digestion.

20. Higher methane, like extra CO2, contributes to:

(A) only acid rain on marble
(B) only silk-colour fading
(C) only ozone at ground level always
(D) global warming and climate change

Correct Answer: D

Explanation: CH4 is a greenhouse gas — so "global warming and climate change" is the matching option.

21. Ground-level ozone is a secondary pollutant formed from NOx and VOCs in:

(A) sunlight
(B) total darkness only
(C) only liquid nitrogen
(D) only distilled water

Correct Answer: A

Explanation: Ground-level ozone is a secondary pollutant formed from NOx and VOCs in sunlight.

22. Sunlight can split NO2 into NO and atomic oxygen; atomic oxygen then makes ozone by reacting with:

(A) argon only
(B) O2
(C) helium only
(D) gold

Correct Answer: B

Explanation: O + O2 → O3 — so "O2" is the matching option.

23. Ground-level ozone can irritate breathing and also:

(A) always heal forests
(B) turn air into pure nitrogen
(C) damage vegetation and reduce crop yield
(D) remove all CO2

Correct Answer: C

Explanation: It is harmful to plants as well as lungs.

24. Natural air-pollution sources include forest fires, dust storms, volcanoes, and:

(A) only electric cars
(B) only N95 factories
(C) only Paris Agreement meetings
(D) lightning making nitrogen oxides

Correct Answer: D

Explanation: Natural air-pollution sources include forest fires, dust storms, volcanoes, and lightning making nitrogen oxides.

25. Termites and cows are listed as biological sources of:

(A) methane
(B) argon
(C) helium
(D) neon

Correct Answer: A

Explanation: Anaerobic digestion/decay releases CH4 — so "methane" is the matching option.

26. A large share of human air pollution is linked to:

(A) only melting ice silently
(B) burning coal, petroleum, and natural gas
(C) only noble-gas lamps

(D) only distilled-water labs

Correct Answer: B

Explanation: A large share of human air pollution is linked to burning coal, petroleum, and natural gas.

27. The chapter notes that cars and other motor vehicles contribute nearly:

(A) none of urban pollution
(B) all of Earth's nitrogen
(C) about half of air pollution
(D) all of argon

Correct Answer: C

Explanation: Transport is a major anthropogenic source.

28. Limited-oxygen combustion of carbon is written as producing:

(A) only N2
(B) only Ar
(C) only O3
(D) CO

Correct Answer: D

Explanation: C + limited O2 → CO — so "CO" is the matching option.

29. Burning sulphur in air produces:

(A) SO2
(B) only CH4
(C) only He
(D) only glucose

Correct Answer: A

Explanation: S + O2 → SO2 — so "SO2" is the matching option.

30. High-temperature combination of nitrogen and oxygen in engines gives:

(A) only H2O
(B) 2NO
(C) only NaCl
(D) only cellulose

Correct Answer: B

Explanation: N2 + O2 → 2NO at high T — so "2NO" is the matching option.

31. NO can oxidise further in air to:

(A) only He
(B) only diamond
(C) NO2
(D) only starch

Correct Answer: C

Explanation: 2NO + O2 → 2NO2 — so "NO2" is the matching option.

32. Table properties: carbon monoxide is a:

(A) reddish-brown pungent gas
(B) blue hydrated salt
(C) green chlorine cloud only
(D) colourless, odourless, poisonous gas

Correct Answer: D

Explanation: That is why CO detectors matter — you cannot smell it.

33. NO2 is described as a:

(A) reddish-brown gas with a pungent odour
(B) colourless odourless noble gas
(C) white anhydrous powder

(D) blue hydrated crystal

Correct Answer: A

Explanation: Contrast with colourless NO — so "reddish-brown gas with a pungent odour" is the matching option.

34. Greenhouse gases named include water vapour, methane, and:

(A) argon mainly
(B) carbon dioxide
(C) helium mainly
(D) neon mainly

Correct Answer: B

Explanation: Greenhouse gases named include water vapour, methane, and carbon dioxide.

35. Earth's surface emits energy mainly as:

(A) only X-rays
(B) only gamma rays from soil
(C) infrared radiation
(D) only ultraviolet from rocks

Correct Answer: C

Explanation: Warmed land and oceans radiate IR that greenhouse gases can trap.

36. The natural greenhouse effect is essential because without it Earth would be:

(A) much hotter always
(B) exactly 100 °C everywhere
(C) made of pure oxygen
(D) much colder and harder for life

Correct Answer: D

Explanation: The natural greenhouse effect is essential because without it Earth would be much colder and harder for life.

37. Global warming here means extra warming from humans disturbing:

(A) the natural balance of greenhouse-gas concentrations
(B) only Earth's core iron
(C) only noble-gas lamps
(D) only the pH of vinegar

Correct Answer: A

Explanation: Global warming here means extra warming from humans disturbing the natural balance of greenhouse-gas concentrations.

38. Consequences listed include changing rainfall (floods and droughts) and:

(A) turning N2 into gold
(B) melting polar ice and rising sea levels
(C) stopping all photosynthesis forever
(D) removing all argon

Correct Answer: B

Explanation: Consequences listed include changing rainfall (floods and droughts) and melting polar ice and rising sea levels.

39. A glass greenhouse stays warmer because IR from plants is:

(A) fully transmitted to space instantly
(B) converted to helium
(C) partly trapped so inside can be 10–15 °C warmer
(D) turned into acid rain

Correct Answer: C

Explanation: A glass greenhouse stays warmer because IR from plants is partly trapped so inside can be 10–15 °C warmer.

40. Incineration of solid waste can cut volume by about two-thirds but still emits:

(A) only pure oxygen
(B) only distilled water
(C) only argon
(D) smoke that may contain NOx and SOx

Correct Answer: D

Explanation: Burning waste is not a clean air solution by itself.

41. Normal rain is slightly acidic from dissolved CO2 with pH about:

(A) 5.6
(B) 7.0 exactly always
(C) 14
(D) 0

Correct Answer: A

Explanation: Normal rain is slightly acidic from dissolved CO2 with pH about 5.6.

42. Acid rain is defined as rain with pH:

(A) exactly 7
(B) less than 5.6
(C) greater than 12
(D) exactly 14

Correct Answer: B

Explanation: Extra mineral acids from SOx and NOx push pH down.

43. Thunderstorm rain in polluted air may reach pH as low as about:

(A) 5.6 always
(B) 11
(C) 2.1
(D) 7.4

Correct Answer: C

Explanation: That is more acidic than vinegar or lemon juice.

44. SO3 forms sulphuric acid by reacting with:

(A) only neon
(B) only gold
(C) only helium
(D) water

Correct Answer: D

Explanation: SO3 + H2O → H2SO4 — so "water" is the matching option.

45. NO2 in moist air can form:

(A) nitric acid
(B) only methane
(C) only glucose
(D) only argon

Correct Answer: A

Explanation: NO2 in moist air can form nitric acid.

46. Acid rain can travel hundreds of kilometres, so damage may occur:

(A) only at the exact chimney
(B) far downwind of the emission source
(C) only underground in magma
(D) only in a test tube

Correct Answer: B

Explanation: It is a regional, not purely local, problem.

47. Marble ($CaCO_3$) is attacked by sulphuric acid producing soluble calcium sulphate, water, and:

(A) nitrogen gas only
(B) helium
(C) carbon dioxide
(D) ozone only

Correct Answer: C

Explanation: Carbonate + acid → salt + H_2O + CO_2, so statues erode.

48. Acid rain on iron can form a soluble salt and release:

(A) only argon
(B) only glucose
(C) only N_2O ice
(D) hydrogen gas

Correct Answer: D

Explanation: $Fe + H_2SO_4 \rightarrow FeSO_4 + H_2$ — so "hydrogen gas" is the matching option.

49. Pictures in the chapter link acid rain with damaged statues, dead trees, and:

(A) dead fish in acidified water
(B) healthier coral always
(C) more argon in air
(D) sweeter fruit only

Correct Answer: A

Explanation: Aquatic life suffers when pH falls — so "dead fish in acidified water" is the matching option.

50. Catalytic converters use platinum, palladium, and:

(A) sodium metal only
(B) rhodium
(C) only wood charcoal always
(D) only sand

Correct Answer: B

Explanation: Catalytic converters use platinum, palladium, and rhodium.

51. In a converter, CO is oxidised toward:

(A) elemental carbon soot only
(B) only CH_4
(C) CO_2
(D) only HCl

Correct Answer: C

Explanation: In a converter, CO is oxidised toward CO_2.

52. NOx in converters is reduced toward:

(A) more SO_2
(B) more soot always
(C) pure ozone
(D) N_2 (and related less-harmful nitrogen)

Correct Answer: D

Explanation: The aim is harmless dinitrogen — so "N_2 (and related less-harmful nitrogen)" is the matching option.

53. Unburnt hydrocarbons in converters are oxidised toward:

(A) CO_2 and H_2O
(B) only N_2O_5
(C) only NaCl
(D) only argon

Correct Answer: A

Explanation: Unburnt hydrocarbons in converters are oxidised toward CO_2 and H_2O.

54. Climate-change strategies include more wind, solar, hydro, geothermal energy and:

(A) burning more high-sulphur coal
(B) energy efficiency and less fossil transport
(C) banning all photosynthesis
(D) raising CO2 on purpose

Correct Answer: B

Explanation: Climate-change strategies include more wind, solar, hydro, geothermal energy and energy efficiency and less fossil transport.

55. Planting trees helps because photosynthesis:

(A) releases extra CO2 only
(B) destroys all N2
(C) takes in CO2 and makes glucose and oxygen
(D) makes acid rain

Correct Answer: C

Explanation: Forests are carbon sinks and improve air quality.

56. Flue-gas desulphurisation uses wet or dry scrubbers, often with calcium oxide, to remove:

(A) argon
(B) helium
(C) neon
(D) SO2

Correct Answer: D

Explanation: Flue-gas desulphurisation uses wet or dry scrubbers, often with calcium oxide, to remove SO2.

57. Low-sulphur fuels reduce acid rain by limiting formation of:

(A) sulphuric acid precursors
(B) only nitrogen gas
(C) only water vapour
(D) only ozone for UV

Correct Answer: A

Explanation: Less fuel sulphur means less SOx — so "sulphuric acid precursors" is the matching option.

58. The Paris Agreement aims to limit warming well below 2 °C and pursue about:

(A) 15 °C extra
(B) 1.5 °C
(C) 100 °C
(D) 0.001 °C only as a joke

Correct Answer: B

Explanation: The Paris Agreement aims to limit warming well below 2 °C and pursue about 1.5 °C.

59. A hydrogen economy is promoted to cut:

(A) all nitrogen from air
(B) all water from rain
(C) CO2 from some transport and industry
(D) photosynthesis

Correct Answer: C

Explanation: Hydrogen can be a low-carbon energy carrier if produced cleanly.

60. Photosynthesis is CO2 + water making glucose and oxygen using chlorophyll and:

(A) nuclear fission only
(B) only acid rain
(C) only NOx
(D) sunlight

Correct Answer: D

Explanation: Photosynthesis is CO2 + water making glucose and oxygen using chlorophyll and sunlight.

61. The photosynthesis equation in the chapter is:

(A) 6CO2 + 6H2O → C6H12O6 + 6O2
(B) CH4 + 2O2 → only N2
(C) 2NO + O2 → 2He
(D) SO2 + H2O → only O3

Correct Answer: A

Explanation: The photosynthesis equation in the chapter is 6CO2 + 6H2O → C6H12O6 + 6O2.

62. N95 masks are designed mainly to filter:

(A) all noble gases completely
(B) particles such as dust and smoke
(C) only nitrogen molecules
(D) only infrared heat

Correct Answer: B

Explanation: They reduce inhaled particulates — so "particles such as dust and smoke" is the matching option.

63. Gas masks may use activated carbon to absorb:

(A) only liquid iron
(B) only helium nuclei
(C) some gases and VOCs
(D) only sunlight

Correct Answer: C

Explanation: Carbon beds trap certain vapours — so "some gases and VOCs" is the matching option.

64. An air-quality index (AQI) helps people:

(A) measure Earth's core temperature
(B) make more SO2
(C) ban oxygen
(D) judge pollution level and take precautions

Correct Answer: D

Explanation: An air-quality index (AQI) helps people judge pollution level and take precautions.

65. A CO detector is installed because carbon monoxide is:

(A) hard to notice by smell, yet toxic
(B) always visible as brown smoke
(C) a nutrient
(D) identical to argon

Correct Answer: A

Explanation: Alarms allow ventilation or evacuation — so "hard to notice by smell, yet toxic" is the matching option.

66. Long-term breathing of NOx, SO2, particulates, and ozone can contribute to asthma, lung cancer, and:

(A) only stronger enamel always
(B) COPD
(C) only extra height
(D) only bluer sky forever

Correct Answer: B

Explanation: Chronic obstructive pulmonary disease is listed among risks.

67. Smoking damages lungs and also harms:

(A) only distant forests via CO2 uniquely
(B) only catalytic converters
(C) non-smokers through second-hand smoke
(D) only noble gases

Correct Answer: C

Explanation: Passive smoke is a listed risk factor — so "non-smokers through second-hand smoke" is the matching option.

68. Indoor pollution sources include poor ventilation, mould, dust mites, pets, and:

(A) only polar ice
(B) only stratospheric ozone
(C) only Paris treaties
(D) household chemicals

Correct Answer: D

Explanation: Homes can be polluted without a factory next door.

69. Climate change can worsen breathing problems via forest fires, heat, and:

(A) changed pollen seasons
(B) shorter pollen seasons always
(C) removal of all allergens
(D) making N2 toxic

Correct Answer: A

Explanation: Allergy seasons can lengthen or intensify.

70. Methane from dead plants is especially linked to decay:

(A) in plentiful air always
(B) without air (anaerobic decay)
(C) only in pure oxygen
(D) only on the Sun

Correct Answer: B

Explanation: Anaerobic rotting yields CH4 — so "without air (anaerobic decay)" is the matching option.

71. Ozone is an allotrope of oxygen with formula:

(A) O2 only
(B) O4 always
(C) O3
(D) O

Correct Answer: C

Explanation: Three oxygen atoms make ozone — so "O3" is the matching option.

72. Complete combustion of carbon-containing fuel is the SLO source of:

(A) CO and soot only
(B) only N2
(C) only HCl
(D) CO2

Correct Answer: D

Explanation: Complete combustion of carbon-containing fuel is the SLO source of CO2.

73. Incomplete combustion is the SLO source of CO and:

(A) particulates
(B) only argon crystals
(C) only distilled water
(D) only N2 ice

Correct Answer: A

Explanation: Soot and fine particles accompany CO — so "particulates" is the matching option.

74. Ground-level ozone needs oxides of nitrogen, VOCs, and:

(A) only helium
(B) light
(C) only gold catalysts always

(D) only liquid nitrogen

Correct Answer: B

Explanation: Photochemistry is required — so "light" is the matching option.

75. NO and NO2 also catalyse oxidation of atmospheric SO2, linking NOx to:

(A) stronger marble only
(B) only oxygen production
(C) faster acid-rain chemistry
(D) only N2 liquefaction

Correct Answer: C

Explanation: They help convert SO2 toward SO3/H2SO4 — so "faster acid-rain chemistry" is the matching option.

76. A converter reaction highlighted for CO and NO is of the type:

(A) N2 + O2 → only gold
(B) H2O → only SO2
(C) Ar → Ne
(D) CO + NO → CO2 + N2 (redox cleanup)

Correct Answer: D

Explanation: CO is oxidised while NO is reduced — so "CO + NO → CO2 + N2 (redox cleanup)" is the matching option.

77. Reducing livestock farming is listed as a climate strategy mainly to cut:

(A) methane emissions
(B) all oxygen
(C) all nitrogen
(D) all argon

Correct Answer: A

Explanation: Ruminants are a CH4 source — so "methane emissions" is the matching option.

78. Using catalytic converters is listed under acid-rain control because they cut:

(A) all water vapour
(B) NOx (and related exhaust toxins)
(C) all CO2 from breathing
(D) all O2

Correct Answer: B

Explanation: Less NOx means less nitric acid in rain.

79. Personal protection listed alongside masks and AQI includes:

(A) burning more coal indoors
(B) removing all trees
(C) CO detectors
(D) banning oxygen

Correct Answer: C

Explanation: Alarms address the odourless CO hazard — so "CO detectors" is the matching option.

80. Most air pollution from human activity is tied in review thinking to:

(A) only neon advertising
(B) only melting sugar
(C) only noble-gas welding
(D) burning fossil fuels

Correct Answer: D

Explanation: Most air pollution from human activity is tied in review thinking to burning fossil fuels.

B. Less Important / Secondary Topics

81. Deserts typically have:

(A) little water vapour compared with rainforests
(B) the highest water-vapour percent always
(C) 4% water vapour exactly
(D) no atmosphere

Correct Answer: A

Explanation: Humidity is geographically variable — so "little water vapour compared with rainforests" is the matching option.

82. SO2 left in open air can fade the colour of:

(A) gold bars only
(B) silk clothes
(C) diamond only
(D) helium balloons only

Correct Answer: B

Explanation: SO2 left in open air can fade the colour of silk clothes.

83. Lead-containing paints are listed among:

(A) beneficial nutrients
(B) noble gases
(C) polluting substances
(D) catalytic metals

Correct Answer: C

Explanation: Lead is an environmental toxin — so "polluting substances" is the matching option.

84. Herbicides, pesticides, and insecticides appear as examples of:

(A) components of dry air at 78%
(B) ozone allotropes
(C) greenhouse glass types
(D) pollutants from human activity

Correct Answer: D

Explanation: Agricultural chemicals can contaminate air, water, or soil.

85. A greenhouse of glass or polymer film lets sunlight in for photosynthesis but traps:

(A) infrared/heat from plants
(B) all ultraviolet from space always
(C) all nitrogen
(D) all argon

Correct Answer: A

Explanation: The 10–15 °C extra warmth is the horticultural greenhouse effect.

86. Incineration leaves behind:

(A) only pure oxygen
(B) ash and non-combustibles plus air pollution
(C) only glucose
(D) only N2 crystals

Correct Answer: B

Explanation: Volume drops, but emissions remain — so "ash and non-combustibles plus air pollution" is the matching option.

87. Nitrous acid is named with sulphuric and nitric acids as:

(A) noble gases
(B) components of dry air at 21%
(C) possible acids in polluted rain
(D) catalytic metals

Correct Answer: C

Explanation: NOx chemistry can yield more than one nitrogen acid.

88. Sustainable agriculture in the chapter includes preferring:

(A) more illegal groundwater drilling
(B) more high-sulphur coal
(C) clearing all forests
(D) organic fertilisers over heavy chemical pesticide use

Correct Answer: D

Explanation: Sustainable agriculture in the chapter includes preferring organic fertilisers over heavy chemical pesticide use.

89. A circular economy is described as minimising waste and promoting:

(A) recycling
(B) more incineration only
(C) more SO2
(D) more methane flaring always

Correct Answer: A

Explanation: A circular economy is described as minimising waste and promoting recycling.

90. Forest regeneration is listed to promote carbon sequestration and:

(A) more acid rain
(B) wildlife habitat
(C) more NOx from lightning only
(D) removing oxygen

Correct Answer: B

Explanation: Forest regeneration is listed to promote carbon sequestration and wildlife habitat.

91. Electric vehicles, walking, cycling, and public transport are grouped as ways to cut:

(A) all photosynthesis
(B) all nitrogen
(C) transport CO2
(D) all rain

Correct Answer: C

Explanation: They reduce fossil-fuel use in travel — so "transport CO2" is the matching option.

92. Policy tools named include renewable-energy incentives and:

(A) banning catalytic converters
(B) requiring more SO2
(C) removing AQI
(D) emissions regulations

Correct Answer: D

Explanation: Policy tools named include renewable-energy incentives and emissions regulations.

93. Allergens listed include pollen, mould spores, pet dander, and:

(A) dust
(B) argon crystals
(C) pure O2 only
(D) helium nuclei

Correct Answer: A

Explanation: Allergens listed include pollen, mould spores, pet dander, and dust.

94. Quitting smoking is grouped with masks and indoor air quality as:

(A) a way to make more NOx
(B) personal protection against pollution harm
(C) a greenhouse-gas source only
(D) an acid-rain definition

Correct Answer: B

Explanation: Lifestyle cuts a major lung risk — so "personal protection against pollution harm" is the matching option.

95. Dibenzothiophene in coal is a think-tank example of a:

(A) noble gas
(B) carbohydrate
(C) sulphur compound that can lead to SOx/acid rain when coal burns
(D) DNA base

Correct Answer: C

Explanation: Dibenzothiophene in coal is a think-tank example of a sulphur compound that can lead to SOx/acid rain when coal burns.

96. Removing sulphur from coal before burning is urged to:

(A) increase haze
(B) make more SO2
(C) stop photosynthesis
(D) cut acid-rain precursors

Correct Answer: D

Explanation: Pre-combustion cleaning limits SOx — so "cut acid-rain precursors" is the matching option.

97. The chapter's tea/milk analogy treats pollutants as:

(A) impurities that make a useful mixture unhealthy
(B) the 78% nitrogen itself
(C) always beneficial minerals
(D) only water vapour

Correct Answer: A

Explanation: Concentration and contamination matter — so "impurities that make a useful mixture unhealthy" is the matching option.

98. Iron nails rusting faster in rainwater than tap water is an observation hinting that:

(A) rain is pure argon
(B) rain can be more chemically aggressive
(C) rain is always pH 14
(D) rain has no dissolved gases

Correct Answer: B

Explanation: Iron nails rusting faster in rainwater than tap water is an observation hinting that rain can be more chemically aggressive.

99. Neon, helium, krypton, and hydrogen appear in the dry-air table as:

(A) each 21%
(B) each 78%
(C) tiny volume percents
(D) acid-rain gases

Correct Answer: C

Explanation: They are trace components, not pollutants of main concern.

100. Ground-level ozone is often discussed with the everyday word:

(A) argon
(B) diamond
(C) urea
(D) smog

Correct Answer: D

Explanation: Ground-level ozone is often discussed with the everyday word smog.

101. Volcanoes emit dust, ash, and:

(A) poisonous gases
(B) only distilled water
(C) only glucose
(D) only N95 fabric

Correct Answer: A

Explanation: Natural point sources can rival some human events.

102. Residential heating with fossil fuels or wood is listed as a source of:

(A) only stratospheric ozone
(B) CO (and related incomplete-combustion products)
(C) only Paris Agreement text
(D) only argon

Correct Answer: B

Explanation: Residential heating with fossil fuels or wood is listed as a source of CO (and related incomplete-combustion products).

103. Catalytic converters should be required, the text argues, by:

(A) banning all cars only
(B) removing oxygen from air
(C) government enforcement on car makers
(D) increasing livestock

Correct Answer: C

Explanation: Catalytic converters should be required, the text argues, by government enforcement on car makers.

104. Afforestation both stores carbon and can:

(A) increase illegal drilling
(B) raise pH of vinegar
(C) make NO2 reddish-brown
(D) reduce soil erosion

Correct Answer: D

Explanation: Afforestation both stores carbon and can reduce soil erosion.

105. Holistic climate strategy needs cooperation among individuals, businesses, and:

(A) public officials
(B) only volcanoes
(C) only termites
(D) only lightning

Correct Answer: A

Explanation: Holistic climate strategy needs cooperation among individuals, businesses, and public officials.

106. High-risk long-term exposure is said to reduce:

(A) the need for AQI
(B) longevity via respiratory disease
(C) the existence of nitrogen
(D) melting points of ice only

Correct Answer: B

Explanation: High-risk long-term exposure is said to reduce longevity via respiratory disease.

107. Visible light from the Sun mostly:

(A) is identical to trapped IR
(B) is acid rain
(C) passes to Earth’s surface before warming and IR emission
(D) is NOx

Correct Answer: C

Explanation: Visible light from the Sun mostly passes to Earth’s surface before warming and IR emission.

108. A project on global warming should name contributing gases, which worry us most, and:

(A) only noble-gas prices
(B) only silk dyes
(C) only heptane formulae
(D) ways to reduce the problem

Correct Answer: D

Explanation: A project on global warming should name contributing gases, which worry us most, and ways to reduce the problem.