Here are **30 questions for each category** based on the chapter **"Air and Atmosphere"** from your textbook.

SECTION A

(1) Multiple Choice Questions (MCQs)

1. What is the major component of air?
   a) Oxygen
   b) Nitrogen
   c) Carbon dioxide
   d) Argon

2. What percentage of oxygen is present in air by volume?
   a) 21%
   b) 78%
   c) 1%
   d) 0.03%

3. Which gas is essential for respiration?
   a) Nitrogen
   b) Oxygen
   c) Carbon dioxide
   d) Argon

4. Which gas is required for photosynthesis?
   a) Oxygen
   b) Carbon dioxide
   c) Nitrogen
   d) Argon

5. What is the primary cause of global warming?
   a) Nitrogen
   b) Oxygen
   c) Greenhouse gases
   d) Argon

6. What is the main gas responsible for the greenhouse effect?
   a) Oxygen

b) Carbon dioxide
c) Nitrogen
d) Argon

7. Which gas is used in filling weather balloons?
   a) Helium
   b) Oxygen
   c) Carbon dioxide
   d) Nitrogen

8. What is the chemical formula of carbon dioxide?
   a) CO
   b) CO_2
   c) CH_4
   d) O_2

9. Which gas is the most abundant in Earth's atmosphere?
   a) Oxygen
   b) Nitrogen
   c) Carbon dioxide
   d) Argon

10. Which gas is used in the Haber process for ammonia production?
    a) Carbon dioxide
    b) Oxygen
    c) Nitrogen
    d) Argon

(2) Fill in the Blanks

11. The Earth's atmosphere is made up of a mixture of ___.
12. The two major gases in air are ___ and ___.
13. The percentage of nitrogen in air is ___.
14. The gas required for combustion is ___.
15. Plants take in ___ and release ___ during photosynthesis.
16. The gas that causes the greenhouse effect is ___.
17. ___ is used in fire extinguishers to put out fires.
18. The process by which nitrogen is converted into usable forms is called ___.
19. The primary cause of air pollution is ___.
20. The gas used in neon lights is ___.

(3) True or False

21. Air is made up of only oxygen and nitrogen.
22. Carbon dioxide is necessary for plant growth.
23. Oxygen is the most abundant gas in the atmosphere.
24. The nitrogen cycle helps maintain nitrogen balance in nature.
25. Greenhouse gases help trap heat in the Earth's atmosphere.
26. Carbon monoxide is a toxic gas.
27. Global warming is caused by a decrease in greenhouse gases.
28. Sulfur dioxide contributes to acid rain.
29. Argon is a noble gas found in the atmosphere.
30. Water vapor is not a part of air.

SECTION B

(4) Odd One Out (Give Reason)

31. Nitrogen, Oxygen, Argon, Carbon Dioxide
32. Helium, Neon, Oxygen, Krypton
33. Sulfur dioxide, Carbon monoxide, Oxygen, Nitrogen dioxide
34. Photosynthesis, Respiration, Combustion, Evaporation
35. Carbon dioxide, Methane, Oxygen, Water vapor
36. Smog, Acid Rain, Combustion, Global Warming
37. Nitrogen, Oxygen, Carbon dioxide, Hydrogen
38. Air Pollution, Water Pollution, Soil Pollution, Photosynthesis
39. Lightning, Photosynthesis, Fossil Fuels, Greenhouse Effect
40. Nitrogen Fixation, Respiration, Combustion, Oxidation

(5) Matching Questions

41. Carbon dioxide - a) Used in photosynthesis
42. Nitrogen - b) Most abundant gas in the atmosphere
43. Oxygen - c) Supports combustion
44. Argon - d) Used in light bulbs
45. Helium - e) Used in weather balloons
46. Methane - f) Greenhouse gas
47. Neon - g) Used in advertising lights

48. Sulfur dioxide - h) Causes acid rain
49. Carbon monoxide - i) Toxic gas
50. Ozone - j) Protects from UV radiation

(6) Name the Type of Reaction

51. Oxygen supports combustion
52. Plants take in carbon dioxide and release oxygen
53. Rusting of iron
54. Formation of acid rain from sulfur dioxide
55. Burning of fossil fuels producing carbon dioxide
56. Formation of nitrogen oxides in vehicle exhaust
57. Melting of ice
58. Water cycle in nature
59. Conversion of nitrogen gas into ammonia by bacteria
60. Freezing of water into ice

SECTION C

(7) Short Answer Questions

61. What are the major components of air?
62. What is the role of nitrogen in the atmosphere?
63. Why is oxygen important for living organisms?
64. What is the greenhouse effect?
65. What causes global warming?
66. How does air pollution affect human health?
67. What is acid rain?
68. How is nitrogen fixed in the atmosphere?
69. What are the effects of carbon monoxide on health?
70. What are inert gases? Give two examples.

(8) Diagram-Based Questions

71. Draw a labeled diagram of the nitrogen cycle.
72. Illustrate the process of photosynthesis with chemical equations.
73. Show the greenhouse effect using a diagram.

74. Draw an experimental setup to demonstrate the presence of oxygen in air.
75. Represent the formation of acid rain with a flowchart.

(9) Reasoning-Based Questions

76. Why is nitrogen important for plants?
77. Why is carbon dioxide necessary for photosynthesis?
78. Why is oxygen required for combustion?
79. How does deforestation contribute to global warming?
80. Why is air considered a mixture and not a compound?

(10) Chemical Formula & Symbol-Based Questions

81. Write the chemical formula of carbon dioxide.
82. What is the chemical formula of oxygen gas?
83. Write the balanced equation for the rusting of iron.
84. Write the chemical equation for photosynthesis.
85. What is the chemical formula of nitrogen gas?

This completes **30 questions in each category** based on **"Air and Atmosphere."** Let me know if you need any modifications! 🚀