

Quiz – Soil

MULTIPLE CHOICE QUESTIONS

1. Humus and the smallest particles of rock form the
 - a) A-horizon
 - b) B-horizon
 - c) C-horizon
 - d) bedrock
2. Which type of soil is best for growing cotton?
 - a) Sandy
 - b) clayey
 - c) loamy
 - d) sandy-loam
3. Water percolating into the soil collects over
 - a) A-horizon
 - b) B-horizon
 - c) C-horizon
 - d) none of these
4. Water logging can be expected in soil which is rich in
 - a) Sand
 - b) clay
 - c) silt
 - d) humus
5. Paddy grows best in
 - a) clayey soil
 - b) loam
 - c) sandy soil
 - d) sandy-loam
6. The microorganisms present in the soil require moisture (water) and nutrients for growth and survival. Choose from the options below the habitat (place) where the soil has plenty of water and nutrients.
 - a) Desert
 - b) Forest
 - c) Open field
 - d) Cricket ground
7. Soil conservation measures are mainly aimed at protecting which of the following?
 - a) Plants
 - b) Top soil
 - c) Sub soil
 - d) Soil organisms
8. Soil erosion affects topsoil by
 - a) washing it away
 - b) moving it to another area where it is needed more
 - c) keeping it moist
 - d) making it more fertile
9. Decayed organic matter is turned into dark coloured material called
 - a) litter
 - b) humus
 - c) clay
 - d) soil
10. Which of the following activities prevents soil erosion?
 - a) construction
 - b) overgrazing
 - c) deforestation
 - d) afforestation
11. Which of the following lists soil particles from the smallest to the largest?
 - a) sand, gravel, clay, silt
 - b) clay, silt, sand, gravel
 - c) gravel, silt, sand, clay
 - d) silt, sand, clay, gravel
12. Soils are classified into different types on the basis of
 - a) weather
 - b) types of plants growing in them
 - c) soil composition
 - d) size of animal population
13. Water holding capacity of soil depends on
 - a) composition of soil
 - b) temperature of soil
 - c) colour of soil
 - d) texture of soil
14. C horizon of the soil profile is also known as
 - a) regolith
 - b) subsoil
 - c) humus
 - d) bedrock
15. Which type of soil is considered best for growing crops?
 - a) sandy soil
 - b) clayey soil
 - c) loamy soil
 - d) slit soil

QUESTION ANSWER

1. What consequences can a storm have on lands with clayey soil?
2. Ravi had grown a flowering plant in a pot. Every time he watered the plant, water would not get drained. What should he add in the soil to improve the drainage of water?
3. Vinita sterilized the soil to grow some plants. Is this going to benefit the growth of the plants?
4. The components of loamy soil are _____, _____ and _____?
5. Read the following statements and give the appropriate terms for each of them.
 - a) The process of breakdown of rocks by the action of wind, water, sunlight.
 - b) Removal of top soil during heavy rains or strong winds.
 - c) Accumulation of wastes in the soil generated by human activity which alter the features of soil.
 - d) The process of movement of water into deeper layers of soil.
6. Which of the following situations A or B is advantageous for absorption of water and minerals? Why?
Situation A: Growth and branching of roots in the C-horizon.
Situation B: Growth and branching of roots in A and B-horizon.
7. Is it a good practice to remove grass and small plants that are growing in an open, unused field? Give reason to support your answer.
8. A man digging a pit found that he could dig with ease initially but digging became difficult as he went deeper. He could not dig beyond a depth of 5 feet. Provide a suitable scientific explanation.
9. Rajasthan is a desert state in India. Once while travelling to Rajasthan by train, Ravi observed several streams and rivulets of rain water during the journey but to his surprise he did not see streams of water in the desert region even during rains. Help Ravi find a suitable explanation for this.
10. Breaking down of rock into smaller pieces by natural forces is called _____
11. Which absorbs more water - sandy soil or clay?
12. The layer of soil that contains the largest rock pieces is called _____
13. In general, which is the best topsoil for growing plants?
14. Water logging occurs in sandy soil. True or false?
15. Is soil a natural resource?
16. Humus is formed by the action of insects on soil. True or false?
17. What effect does construction of buildings and roads have on water percolation through the soil?
Hence what effect would this have on the water table?
18. Soil is constantly formed by weathering of rocks. Why then are we so concerned about soil erosion?
19. Why does topsoil have much more humus than subsoil?
20. What kind of soil is most suitable for making toys and why?

Answer

MULTIPLE CHOICE QUESTIONS

1. a
2. d
3. d
4. b
5. a
6. b
7. b
8. a
9. b
10. d
11. b
12. c
13. a
14. a
15. c

QUESTION ANSWER

1. The soil becomes water logged and hence the plants would die or collapse.
2. He should add sand as it will not be able to hold water and would drain out water.
3. No, It will kill the essential microorganisms that are present in the soil and that helps in growth.
4. Sand, Silt and Clay
5. a) Weathering b) Erosion c) Soil pollution d) Percolation
6. Situation B – is advantageous to plants because A - and B – horizons are rich in water, minerals and humus.
7. No, it is not a good practice. Plants cover the soil surface and their roots bind the soil particles and hold them in place. During strong winds and rains they prevent soil erosion and thereby protect the top soil.
8. The soil surface has loose top soil which is easier to dig. At deeper layers, partially weathered rocks or bedrocks are present, which are hard making digging difficult.
9. Deserts are vast stretches of sand where the falling rain water immediately percolates downwards in the spaces between sand particles. Due to this he did not see streams of water in the desert region.
10. Weathering
11. Clayey soil
12. C-horizon
13. The best topsoil for growing plants is loam. Loam is a mixture of sand, silt, clay and humus. It has the right water-holding capacity for plant growth.

14. False.

Water logging occurs in clayey soil, which absorbs and retains a lot of water. Sandy soil cannot absorb much water because of the large spaces between the soil particles.

15. Yes, soil is a natural resource because it comes from the earth and is used by us.

16. False.

A variety of dead and decaying organisms contribute to the formation of humus.

17. The rate of water percolation through the soil decreases as a result of construction of buildings and roads because water cannot percolate into cement. Due to this, the water table will shrink.

18. Topsoil is the most fertile soil because it consists of humus. Soil erosion removes topsoil, thus decreasing soil fertility. The formation of topsoil by the process of weathering takes a very long time. Hence, we are so concerned about soil erosion.

19. Humus is formed by the death and decay of plants and animals. When small plants die, they mix with the soil to form humus. These plants and animals are confined to topsoil. Hence, topsoil have much more humus than subsoil.

20. Clayey soil is most suitable for making toys because it does not crumble when rolled into a ball.