



BIOLOGY

BOOKS - LAKHMIR SINGH & MANJIT KAUR

SOIL

Example

1. 200 grams of a soil is taken and dried completely in bright sunshine. The mass of

dried soil is found to be 170 grams. Calculate the percentage of water (or moisture) present in the given sample of the soil.



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2. Which of the following helps in soil formation?

A. Formation of rocks.

B. Arrangement of layers of sand.

C. Breaking down of rocks.

D. Arrangement of rocks.

Answer: C



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3. Which of these is a part of soil that is most helpful to the growth of plants?

A. Humus

B. Sand

C. Clay

D. Small porous rocks

Answer: A



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Exercise

1. When some dry soil is added to water in a beaker and stirred with a glass rod, bubbles are seen coming out of the soil. What do these bubbles consist of?

- A. Water vapour
- B. Only oxygen gas
- C. Air
- D. None of these

Answer: C



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2. Which component of soil makes the air above the soil in a farmland shimmer on a hot summer day?



3. What is the function of air present in the spaces between the soil particles?



4. Which type of soil : is the best for making pots, bricks, toys and statues?



5. Which type of soil : can hold very little water ?



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6. Which two soils are suitable for growing cereals like wheat, and gram?

A. Clayey soil

B. Loamy soil

C. Sandy soil

D. Both A and B

Answer: D



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7. Which is the best soil for growing wheat crop?



8. Which type of soil is ideal for growing paddy (rice crop) ?

A. Sandy soil

B. Loamy soil

C. Clayey soil

D. None of the above

Answer: C



9. What kind of soil is required for growing lentil (masoor dal) and other pulses ?

- A. Sandy soil
- B. Loamy soil
- C. Clayey soil
- D. None of the above

Answer: B



10. Which type of soil is more suitable for growing cotton crop?



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11. Name the different types of rock particles present in soil.



12. Name the rock particles present in a soil which are bigger than clay particles but smaller than sand particles.



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13. Arrange the following rock particles which occur in soil in the increasing order of their sizes (keeping the smallest one first):

Sand, Clay, Gravel, Silt.



14. Which important component of fertile soil is missing from the following?

Air, Water, Rock particles, Minerals, Living organisms.



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15. Name the natural process which breaks down huge rocks slowly to form tiny particles fit to make soil.



16. With which substance should the tiny rock particles mix to form fertile soil ?



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17. What name is given to the side view of soil as seen in a recently dug up trench?



18. Out of sandy, loamy and clayey soils : which one has the maximum, water-holding capacity?



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19. Out of sandy, loamy and clayey soils : which one has the minimum water-holding capacity?



20. Name the most fertile soil for growing plants.



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21. Which soil contains the right proportions of sand, clay, silt and humus ?



22. What is the collective name for the various layers of soil?



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23. Name the three layers of soil in terms of 'horizons'.



24. Which horizon of soil profile contains a lot of humus ?



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25. Fungi and bacteria grow mostly in which layer of soil?

A. Subsoil

B. Topsoil

C. Bedrock

D. None of the above

Answer: B



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26. What lies beneath C-horizon?

A. Sand

B. Bedrock

C. Humus

D. All of these

Answer: B



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27. Name any five living organisms found in soil.



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28. Which type of soil would have lowest percolation rate of water?

- A. Sandy soil
- B. Clayey soil
- C. Loamy soil
- D. None of these

Answer: B



- 29. Which type of soil wouls have:
- highest percolation rate of water?



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30. What type of carry bags would you use if polythene bags are banned one day?



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31. Name the three basic types of soils.



32. What name is given to the removal of top soil by wind or water?



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33. Name any two factors which bring about the removal of top soil during soil erosion.



34. Which part of the trees and plants binds the soil together and prevents soil erosion?



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35. Fill in the following blanks with suitable words

The mixture of rock particles and humus is called



Each layer of soil Is called a



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37. Fill in the following blanks with suitable words

The roots of small plants grow entirely in the Soil.



The middle layer of soil is called horizon.

- A. A horizon
- B. B horizon
- C. C horizon
- D. D horizon

Answer: B



A vertical section through different layers of soil is called soil

A. Profile

B. Layers

C. Humus

D. None of the above

Answer: A



Tree and others plant roots firmly bind the particles.



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41. Fill in the following blanks with suitable words

In the absence of trees and plants, soil becomes



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42. Fill in the following blanks with suitable words

In desert areas, soil erosion occurs mainly



Increasing green cover (vegetation) helps prevent soil



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44. Fill in the following blanks with suitable words

The use ofbags should be banned to avoid soil pollution.



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45. Fill in the following blanks with suitable words

Percolation rate of water in soil is expressed in the unit of



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46. What happens when a test-tube full of water is:

poured on cemented floor?

47. Consider the following statements and choose the incorrect One:

A. Soil is used to make earthenware or pottery.

B. Soil is used to make bricks and mortar for building houses.

C. Soil is used to grow only cotton plants.

D. Soil is used to grow trees for obtaining wood, fruits etc.

Answer: C



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48. Explain why, when some water is poured on soil, it gets absorbed but the same water flows down when poured on a cemented floor.



49. Which of the two provides more air to plant roots: sandy soil or clayey soil? Why?



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50. State the important properties of soil.



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51. How is loamy soil very useful for the crops?



52. Can we make a pot with sandy soil ? Give reason for your answer.



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53. Match the items given in column I with those in column II:

Column I

(i) A home for living organisms
(ii) Upper layer of the soil
(iii) Sandy soil
(iv) Middle layer of the soil
(v) Clayey soil

Column II

(a) Large particles
(b) All kinds of soils
(c) Dark in colour
(d) Small particles and packed tight
(e) Lesser amount of humus



54. Name the various components of soil. A little of soil is stirred with water in a beaker and allowed to stand. Which component of soil will float on the surface of water?



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55. A student conducted an experiment to determine the percolation rate of water in a soil. He observed that it took 45 minutes for

180 mL of water to percolate through the soil.

Calculate the percolation rate of water in soil.



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56. Explain why, the soil covered by vegetation is not eroded easily but the bare soil is eroded easily.



57. How do trees and other plants prevent soil erosion?



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58. What are the various ways in which soil erosion can be prevented?



59. Write the differences between sandy soil and clayey soil.



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60. Which of the following regulate soil formation?

A. Rainfall

B. Temperature

C. Wind

D. All of the above

Answer: D



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61. Explain why, there is growing demand to ban polythene bags and plastics.



62. What is meant by 'soil profile'? Draw a sketch of the soil profile and label the various layers. Name any two situations in which we can see the soil profile at a place.



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63. What is meant by sandy soil, clayey soil and loamy soil? Give any two properties each of sandy soil, clayey soil and loamy soil.



64. What is soil? How is soil formed? Describe an activity to show that soil contains water.



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65. What is meant by 'soil erosion'? State the cause of soil erosion. What are the effects of soil erosion?



66. What is meant by soil pollution? Name any four things which can cause soil pollution. How can soil pollution be prevented?



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67. In addition to the rock particles, the soil contains

A. air and watter

B. water and plants

- C. minerals, organic matter, air and water
- D. water, air and plants

Answer: C



- **68.** The water-holding capacity is highest in :
 - A. sandy soil
 - B. clayey soil
 - C. loamy soil

D. mixture of sandy and loamy soils

Answer: B



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69. Which of the following present in soil has the smallest sized rock particles ?

A. gravel

B. silt

C. clay

D. sand

Answer: C



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70. The best soil for growing paddy is the one which has:

- A. low percolation rate of water
- B. high percolation rate of water
- C. moderate percolation rate of water

D. zero percolation rate of water

Answer: A



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71. The removal of fertile top soil from land by wind or water is called soil :

A. corrosion

B. erosion

C. effusion

D. diffusion

Answer: B



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72. The manufacture of which of the following materials on a large scale is a cause of soil erosion? A. Plastics B. Paper C. Polyester D. Plywood

A. A and B

- B. B and C
- C. B and D
- D. Only D

Answer: C



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73. Which one of the following cannot be an effect of soil erosion?

A. desertification

- B. desalinisation
- C. flooding
- D. famine

Answer: B



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74. The component of soil which makes the air above the soil in a farmland shimmer on a hot summer day is :

- A. humus
- B. air
- C. water
- D. sand

Answer: C



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75. Which of the following cannot prevent soil erosion?

- A. reforestation
- B. deforestation
- C. silviculture
- D. plantation

Answer: B



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76. The process by which huge rocks are broken down into small particles by the action

of sun's heat, wind, rain and flowing water, etc.,
is called :
A. farming
B. smothering
C. erosion
D. weathering

Answer: D

77. Which of the following do not cause soil pollution? A. Jute bag B. Acid rain C. Cardboard D. Plastic bag

A. A and B

B. B and C

C. A and C

D. C and D

Answer: C



78. In order to make fertile soil, the tiny rock particles should be mixed with

- A. clay
- B. silt
- C. humus
- D. sand

Answer: C



79. Which type of soil can lead to the maximum water-logging in the fields?

- A. loamy soil
- B. clayey soil
- C. sandy soil
- D. sandy-loam soil

Answer: B



80. One of the following is not a type of soil.

This one is:

A. loamy soil

B. silty soil

C. clayey soil

D. sandy soil

Answer: B



81. The best soil for growing wheat crop is:

A. clayey soil

B. sandy soil

C. loamy soil

D. sandy-loam soil

Answer: C



82. The manufacture of which of the following materials on a large scale is a cause of soil erosion? A. Plastics B. Paper C. Polyester D. Plywood

- A. A and B
- B. B and C
- C. B and D
- D. Only D

Answer: C



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83. It has been observed that 8 to 10 days after the rains, the level of water in a well rises. Which type of soil would allow rainwater to reach the well faster and in greater amount? Give reason for your choice.



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84. Soil A has a high percolation rate of water whereas soil B has a low percolation rate of

water. Which of the two soils, A or B, is most suitable for growing paddy (rice crop)? Why?



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85. Explain why, if we pass through a farmland during a hot summer day, the air above the land appears to be shimmering.



86. A soil sample weighing 150 g is dried completely by keeping in sunshine. The mass of dried soil is 135 g. Calculate the percentage of water (or moisture) in the given sample of soil.



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87. 200 ml of water was taken in a measuring cylinder. This water was added dropwise to 120 g of dry soil kept on filter paper in a funnel.

When the water just started dripping from the funnel, the amount of water left in the measuring cylinder was found to be 140 mL. Calculate the percentage of water absorbed by this soil.

