

SENIOR TWO
AGRICULTURE

Soil and Water Conservation

1. One of the objectives of soil and water conservation is to maintain soil fertility. Which is one of the practices below would lead to loss of soil fertility?
 - A. nutrients loss during drainage
 - B. minimum during seed bed preparation.
 - C. breaking hard pan.
 - D. heaping cross residues along contour lines in the field.
2. Irrigation using soil water may lead to
 - A. crop getting over succulent
 - B. crops absorbing more mineral salts
 - C. water deficiency in plants.
 - D. loss of particular nutrients from the soil surface.
3. Misuse of agriculture chemicals may lead to three of the following, which one will it not lead to ?
 - A. undesirable changes in soil PH
 - B. reduction in soil water
 - C. reduction in soil organism
 - D. damaged plant roots
4. Soil structure is usually damaged by
 - A. irrigation
 - B. continuous cropping
 - C. crop rotation with bush fallowing.
 - D. Addition of organic manures
5. The water holding capacity of a soil may reduce as a result of
 - A. Mulching with dry vegetative material
 - B. Minimum tillage during land preparation.
 - C. The water table being high
 - D. Burning vegetation and crop residues

6. Cultural methods of soil and water conservation are
 - A. methods where machinery is used
 - B. most effective on very steep slopes
 - C. agronomic practices that do not involve use of machinery
 - D. unaffordable to most peasant farmer.
7. Deep ploughing reduces surface runoff by
 - A. leaving the field in a rough condition so that it resists erosion.
 - B. maintaining physical properties of soil
 - C. maintaining soil fertility through nutrient conservation
 - D. encouraging water infiltration by breaking hard pans in the soil.
8. Mulches reduce soil erosion by
 - A. intercepting beating action of rain drops directly on the soil.
 - B. cutting down on weed growth
 - C. maintaining desirable micro organisms in soil
 - D. maintaining soil warm
9. When organic manures are added to the soil
 - A. they control water use by plants.
 - B. they allow greater infiltration and retention of water in soil.
 - C. the nutrients they contain are used and finished immediately
 - D. the nutrients they contain are easily leached out.
10. Trees and pastures are usually grown on very steep slopes
 - A. to stop wind erosion on the leeward side.
 - B. to reduce the steepness of the slope.
 - C. to reduce the impact of water drops on soil.
 - D. to catch runoff water from uphill in a ditch to protect the land below
11. Vegetation plays a big role in soil water conservation by
 - A. leguminous plants fix nitrogen in soil.
 - B. deep rooted plants recycle nutrients.
 - C. reducing impact of rain drops on soil
 - D. being involved in the water cycle, leading to rainfall
12. Rows of trees planted perpendicular to the prevailing wind direction.

- A. create rain for the crop field.
 - B. absorb carbon dioxide from crop fields cutting down on diseases,
 - C. act as barriers against wind that would cause erosion.
 - D. gives crop fields a beautiful scenery.
13. Ridges constructed using vegetation residues across the slope are called
- A. cover crops
 - B. wind break
 - C. strip crops
 - D. windrows
14. The structures mentioned in number 13 help to control erosion by
- A. protect the soil from surface runoff water
 - B. intercept both wind movement and surface water runoff.
 - C. have root systems that bind soil particles together allowing water infiltration.
 - D. act as barriers against wind.
15. Leafy crops that grow very close to the ground
- A. reduce the rate of surface water flow
 - B. prevent scorching of crops by hot winds.
 - C. fix nitrogen in the soil that is later used by other crops
 - D. have roots that can trap erosion water
16. Strip cropping controls erosion by
- A. reducing the length of the slope that is exposed to erosion at any one time
 - B. do not allow soil moisture to escape along the slope
 - C. bind soil particles together so that soil is not easily washed away
 - D. act as barriers against wind that would cause erosion
17. A system where cover crops are grown between rows of other crops to reduce surface runoff is called
- A. Cover cropping
 - B. Intercropping
 - C. Strip cropping
 - D. Crop rotation
18. Planted pastures and controlled grazing on a slope

- A. leaves the soil undisturbed
 - B. allow cut pastures to be used as mulch in crop fields
 - C. load away excess water that cannot be absorbed by the soil.
 - D. allow animal manure to add nutrients to soil
19. Mechanical soil and water conservation has a disadvantage of
- A. being a slow process
 - B. cannot be used on very steep slopes
 - C. it is expensive
 - D. is not effective in controlling erosion
20. Mechanical methods of soil and water conservation are best applicable where
- A. the slopes are gentle
 - B. soil erosion is not a very big threat
 - C. agriculture is already mechanized
 - D. peasant farming is practiced
21. Bunds can best be described as
- A. a series of steps down the slope
 - B. heaps of soil constructed across the slope and planted with grass
 - C. contour guide lines planted with grass
 - D. constructions made by ridges
22. Bunds conserve water and soil by
- A. catching water runoff in a ditch and holding the soil so that it is not washed away
 - B. leading away excess water in a ditch
 - C. absorb soil moisture so that it does not flow away
 - D. reduce direct impact of rain drops on soil
23. Where contour ploughing is practiced
- A. fibrous root systems maintain a good soil structure
 - B. banks supply water in times of scarcity
 - C. mechanical farming can easily be carried out
 - D. furrows that are developed catch the water and reduce surface runoff
24. Contour guidelines are usually
- A. used to separate crop fields

- B. furrows between ridges
 - C. intercept both water and wind erosion
 - D. planted with grass and left undisturbed
25. Terraces are usually constructed on very steep slopes to
- A. create a series of steeps
 - B. to separate the subsoil from the top soil and later use the top soil for crop growing.
 - C. reduce the total sloping area and thus reduce rate of surface runoff
 - D. make it easier to work on the slope
26. Banks constructed during terrace making are planted with grass to
- A. hold water from flowing down the slope and allow more infiltration into the soil
 - B. to provide fodder for animals where mixed farming is carried out
 - C. carry away surplus water safely
 - D. to protect the slope from direct impact of rain drops
27. Graded banks are created by
- A. creating a series of steep down the slope and separating them by banks.
 - B. dividing the field into smaller areas and separating them by banks
 - C. constructing channels across the field to catch running water
 - D. constructing channels on the upper part of the field to catch running water
28. Barrages can best be described s
- A. channels constructed to carry away excess water from the field
 - B. dams made of stones or truss constructed across gullies
 - C. spillways to take away excess water
 - D. interbank areas where soil from erosion is trapped
29. Drainage channels that take away excess water and are away planted with grass are called
- A. Diversion channels
 - B. Absorption channels
 - C. Grassed water ways
 - D. Bank channels
30. Barrages
- A. absorb excess water
 - B. carry excess water at the side of the field

- C. can be used for crop growing
- D. allow sedimentation of soil to fill up gullies.

ANSWERS TO SOIL AND WATER CONSERVATION

S.2 AGRICULTURE

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| 1. | A | 11. | D | 21. | B |
| 2. | C | 12. | C | 22. | A |
| 3. | B | 13. | D | 23. | D |
| 4. | B | 14. | B | 24. | D |
| 5. | D | 15. | A | 25. | C |
| 6. | C | 16. | A | 26. | A |
| 7. | D | 17. | B | 27. | B |
| 8. | A | 18. | D | 28. | B |
| 9. | B | 19. | C | 29. | D |
| 10. | C | 20. | C | 30. | D |