2026 Iowa State Envirothon Current Issue Test

1) Primarily, water moves in the water cycle by all the following methods EXCEPT:
    a. Evapotranspiration
    b. Precipitation
    c. Infiltration
    d. Respiration **
    e. Runoff

2) Which of these elements is considered the basic building block of all living organisms?
    a. Sulphur
    b. Nitrogen
    c. Phosphorus
    d. Calcium
    e. None of these**

3) The carbon cycle is critically important to living organisms because:
    a. It releases CO2 in large amounts for organisms to use.
    b. Carbon is permanently stored in rocks and sediments.
    c. It enables processes that produce O2. **
    d. It breaks down the ozone layer.
    e. It slows down decomposition.

4) Nitrogen fixation is accomplished by:
    a. Symbiotic bacteria relationships in the soil. **
    b. Natural erosion of soil particles.
    c. Volcanic action.
    d. Denitrification by bacteria.
    e. Decomposition of organic matter.

5) Which of the following is an example of a human activity that alters the natural nitrogen cycle is:
    a. Combustion of fossil fuels
    b. Applying artificial fertilizers to the soil
    c. Release of nitrogen in waste water
    d. All of the above **
    e. The nitrogen cycle is ongoing and cannot be altered by human activity.

6) Eutrophication in salt and fresh water:
    a. provides important nutrients to marine and aquatic organisms.
    b. causes overgrowth of algae. **
    c. produces needed oxygen for aquatic animals.
    d. All of the above
    e. None of the above

7) Dead zones in US bodies of waters are thought to be caused by:
    a. gradual warming of water.
    b. depletion of phosphorus and nitrogen needed for aquatic plant growth.
    c. acid rain caused by fossil fuel combustion.
    d. depletion of oxygen available to aquatic organisms. **
    e. All of the above

8) Which of the following is a TRUE statement about phosphorus in our natural world?
    a. Phosphorus makes up much of the membranes of organisms.
    b. Bodies of marine organisms and their waste are primary sources.
    c. There is no gaseous form of phosphorus in our atmosphere.
    d. Phosphorus can leach from the soil into water systems.
    e. All of the above **

9) Which of the following is NOT a characteristic of a healthy watershed?
    a. Areas of warm shallow water and cold deep water **
    b. Adequate capacity to store sediment following runoff events
    c. Natural vegetation
    d. Habitats large enough to support aquatic life
    e. All of the above are characteristics

10) A healthy watershed:
    a. provides pure drinking water that does not need treatment.
    b. has consistent water temperatures year around.
    c. determines the health of the body of water it surrounds. **
    d. has non-native as well as native fish populations present.
    e. must have a strongly sloping topography.

11) Precipitation events typically cause a more rapid rise and fall in stream flow when:
    a. There is no soil cover. **
    b. planted crops are well established.
    c. the area has heavy natural vegetation cover.
    d. it occurs on coarse porous soil types.
    e. the precipitation duration is short

12) Which of the following land use projects may have a negative effect on stream connectivity?

a. Hydroelectric dams
b. Impounding water for irrigation
c. Stream channelization
d. All of the above **
e. None of the above

13) The most prevalent source of agricultural water pollution is:

a. Soil **
b. N,P, K fertilizers
c. Insecticides
d. Heavy metals
e. Nitrous oxide

14) Which of the following is NOT considered a pollutant from farming and ranching?

a. E. coli bacteria
b. Crop residue **
c. Soil sediment
d. Nitrites/Nitrates
e. Herbicide

15) Which of the following is true if nitrogen fertilizer sources in the soil exceed plant needs:

a. Excess nitrogen will attach to soil particles until used.
b. Water runoff will enhance aquatic life.
c. Resulting water can cause potentially fatal disease if consumed. **
d. All of the above are true
e. None of the above are true

16) Which of the following sources would NOT be considered non-point source (NPS) pollution?

a. Excess fertilizer applied to turf
b. Drainage from faulty septic systems
c. Runoff from a concentrated animal feeding Operation (CAFO) **
d. Sediment from stream erosion
e. Oil and grease from streets and parking areas

17) In urban environments, NPS pollution can be prevented by all of following EXCEPT:
    a. Collecting rainwater for watering plants
    b. Burying paints and household chemicals in a suitable local designated area **
    c. Capturing runoff in retention areas
    d. Disposing of pet waste properly
    e. All of the above can prevent NPS pollution

18) Preventing NPS pollution in an agricultural setting could involve which of the following?
    a. Using a planned grazing system
    b. Maintaining cover crops to reduce soil erosion and sequester nitrogen
    c. Limiting nitrogen fertilizer application to what a corn crop would use in a season
    d. Reconstructing a wetland to allow breakdown and filtering of pollutants
    e. All the above **

19) Improper land use may cause all of the following environmental issues EXCEPT:
    a. runoff following a rain event degrading stream water quality.
    b. an increase in wildlife diversity. **
    c. spread of invasive species.
    d. nitrates leaching into groundwater.
    e. increased flooding.

20) Which of the following would NOT be considered a pollutant from an urban area?
    a. Sediment from a construction area
    b. Oil, grease, and other residue from parking areas
    c. Salt from wintry roadways
    d. Composted organic waste
    e. All of the above would be considered a pollutant. **

21) Which of the following is true about runoff from rainwater and snowmelt from impervious groundcover compared to natural vegetation?
    a. More evapotranspiration takes place on warm impervious areas like streets.
    b. Runoff amounts are at least 5 times higher in areas of natural vegetation.
    c. Runoff water temperatures are higher in areas of natural vegetation.
    d. Natural vegetation slows water flow allowing infiltration. **
    e. All of the above

22) Which of the following soil types would be the most effective for filtering water pollutants?
    a. Coarse sand
    b. Limestone bedrock layers
    c. Silty clay loam **
    d. Gravel
    e. Soil will not filter water pollutants

23) Which of the following statements is NOT true concerning water sources?

a. Surface water is more likely to be contaminated than groundwater
b. It may take a month or longer for surface water to reach a groundwater aquifer.
c. It is nearly impossible for groundwater aquifers to become contaminated .**
d. Private wells generally depend on groundwater aquifers for drinking water.
e. None of the above are true.

24) Homeowners can decrease polluted runoff from paved surfaces by using all of the following practices EXCEPT:

a. avoiding hosing down driveways, roadways, and sidewalks.
b. using porous pavement materials.
c. learning to use Integrated Pest Management (IPM) practices when using pesticides.
d. diluting excess toxic waste materials before disposal. **
e. All the above will decrease polluted runoff.

25) Which of the following is NOT true about stormwater drainage systems in urban and suburban areas?

a. Stormwater runoff frequently carries pollutants to nearby waterways.
b. Runoff from storm sewers gather speed as it flows underground.
c. Stormwater drains filter out sediment from soil erosion. **
d. Stormwater bioretention basins can be used to treat stormwater before it reaches waterways.
e. Storm sewer systems can increase flooding of local waterways.

26) Best Management Practices (BMP) for the control of NPS pollution could include:

a. transforming the pollutants chemically.
b. slowing the transport of pollutants by retaining them for periods of time.
c. reducing the sources of pollutants.
d. All of the above **
e. None of the above would control NPS pollution.

27) Low Impact Development (LID) involves:

a. allowing wetlands and floodplains to treat runoff. **
b. using curbs, gutters, and storm drains to handle runoff.
c. transporting rainfall runoff as quickly as possible.
d. spreading out home and business development areas.
e. All of the above

Key:

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