**THE BIOPHYSICAL ENVIRONMENT**

**STUDENT EXERCISE: MULTIPLE CHOICE QUESTIONS**

**1. The four spheres that make up the biophysical environment are**(a) the geosphere, ecosphere, biosphere and lithosphere  
(b) the lithosphere, hydrosphere, biosphere and atmosphere  
(c) the cryosphere, lithosphere, atmosphere and ecosphere  
(d) the lithosphere, hydrosphere, cryosphere and geosphere.

**2. The atmosphere is made up of**(a) one different level  
(b) two different levels  
(c) three different levels  
(d) four different levels

**3. The amount of accessible freshwater in the hydrosphere is**(a) less than one per cent  
(b) less than ten per cent  
(c) less than fifteen per cent  
(d) less than twenty per cent

**4. The cryosphere refers to**(a) the upper part of the atmosphere  
(b) an internal section of the lithosphere  
(c) the coldest part of the biosphere  
(d) freshwater locked up in ice sheets and glaciers

**5. The lithosphere is split up into many parts called**(a) fault zones  
(b) volcanoes and earthquakes  
(c) tectonic plates  
(d) subduction zones

**6. The biosphere is**(a) the zone around the earth containing water  
(b) the zone around the earth containing gasses  
(c) the zone around the earth containing continental and oceanic crust  
(d) the zone around the earth where all life exists

**7. Ecosystems**(a) can be of any size  
(b) are at least the size of a billabong  
(c) must be 10 square kilometres in size  
(d) are continental in scale

**10. Decomposers**(a) break down matter and release nutrients to the atmosphere as a gas  
(b) break down matter and release nutrients to the soil from organic matter  
(c) break down matter and release nutrients to be taken up by the root systems of trees  
(d) all of the above

**11. Rainforest soils are generally not very fertile because**(a) decomposers breakdown matter and release nutrients to the atmosphere as a gas  
(b) decomposers breakdown matter and release nutrients to the soil from organic matter  
(c) decomposers breakdown matter and release nutrients to be taken up by the root systems of trees  
(d) all of the above

**14. To decrease their reliance on chemical fertilisers dairy farmers**(a) stall feed their cattle  
(b) turn to their cows to use their manure as fertiliser on the fields  
(c) use permaculture techniques  
(d) change to growing avocado trees

**16. When water flows over porous soils**(a) it picks up large amounts of silt and clay in suspension  
(b) drainage is impeded  
(c) overland flows soak through easily to the groundwater  
(d) all of the above

**17. Water is cycled back up into the atmosphere through**(a) transpiration and evaporation  
(b) transpiration and precipitation  
(c) evaporation and precipitation  
(d) all of the above

**19. Catchments function as a result of interactions between**(a) water and climate  
(b) gravity and topography  
(c) soil types and vegetation  
(d) all of the above

**20. Urban development affect catchments through**(a) increasing water flows to the river  
(b) decreasing water flows to the river  
(c) increasing the likelihood of drought  
(d) decreasing the likelihood of drought

**21. The clearing of native forests**(a) increasing water flows to the river  
(b) decreasing water flows to the river  
(c) increasing the likelihood of drought  
(d) decreasing the likelihood of drought

**22. The sample study of the coast and the carbon cycle is an example of**(a) the cycling of carbon at a local scale  
(b) the cycling of carbon at a national scale  
(c) the cycling of carbon at a continental scale  
(d) the cycling of carbon at a global scale

**23. Shells are made from**(a) mica, quartz and felspars  
(b) dolerite and gneiss  
(c) calcium carbonate  
(d) all of the above

**24. The carbon cycle**(a) reveals that phytoplankton growing in the oceans takes in carbon and releases oxygen  
(b) reveals that phytoplankton growing in the oceans takes in oxygen and releases carbon  
(c) reveals that phytoplankton growing in the oceans takes in nitrogen and releases carbon  
(d) reveals that phytoplankton growing in the oceans takes in carbon and releases nitrogen

**25. When volcanoes erupt**(a) carbon is stored in the lithosphere  
(b) carbon is released to the atmosphere  
(c) finely pulverised fragments of rock and lava are released to the cryosphere  
(d) lava spills out through fissures into the hydrosphere

**26. Fossil fuel combustion**(a) refers to the burning of tropical forests  
(b) takes place in nuclear power stations  
(c) releases carbon in the atmosphere  
(c) fixes carbon in the lithosphere

**27. Fossil fuels are so called because**(a) they are mined through burrowing into the earth  
(b) they are incapable of further change  
(c) they take hundreds of millions of years to form  
(d) they always contain impressions of plants and animals

**28. Most carbon is stored in the**(a) atmosphere  
(b) hydrosphere  
(c) lithosphere  
(d) biosphere

**29. Burning fossil fuel releases carbon into the atmosphere** **in the form of**(a) chloroflurocarbons  
(b) carbon dioxide  
(c) calcium carbonate  
(d) methyl hydrates

**30. Since industrialisation**(a) human activities have decreased CO2 levels  
(b) human activities have increased CO2 levels  
(c) CO2 levels have stayed the same

SUGGESTED ANSWERS  
1b,2d,3a,4d,5c,6d,7a,8a,9c,10d,11c,12b,13d,14b,15b,16c, 17a,18b,19d,20a,21a,22d,23c,24a,25b,26c,27c,28c,29b,30b.