

2015 Tarleton State University Invitational Contest
Environmental & Natural Resources CDE Written Exam

References:

ESFA = Environmental Science – Fundamentals & Applications by L. DE Vere Burton

MONR = Managing Our Natural Resources by William G. Camp & Betty Heath-Camp 5th Edition

- 1 The "law of conservation of matter" states...Pg. 14 ESFA
 - A Matter may change but cannot be created or destroyed
 - B Applies to all living and non-living resources
 - C Applied to all waste materials
 - D All of the above**

- 2 A group of similar organisms found in a defined area is known as a ...Pg. 7 ESFA
 - A Population**
 - B Biosphere
 - C Group
 - D Community

- 3 Carrying Capacity is... Pg. 35 MONR
 - A The number of organisms in a given area
 - B Double the population
 - C The length of time an ecosystem can support a population
 - D The level of population an ecosystem can support**

- 4 Which is an example of a grassland ecosystem found in the United States?...Pg. 185 ESFA
 - A Boreal forest
 - B Tallgrass prairie**
 - C Pampas
 - D Savannah

- 5 Natural resources that reproduce themselves are referred to as... Pg. 28 MONR
 - A Unusable
 - B Limited
 - C Renewable**
 - D Nonrenewable

- 6 What is the world's largest biome, making up about 71% of the Earth's surface area? Pg. 305 ESFA
- A Forest
 - B Marine**
 - C Grassland
 - D Desert
- 7 43,560 square feet is equal to... Pg. 351 MONR
- A 1 section
 - B 2 acres
 - C 1 square mile
 - D 1 acre**
- 8 Clearing away natural vegetation can result in...Pg. 59 MONR
- A Accelerated erosion**
 - B Slowed erosion
 - C Sterilized soils
 - D No erosion
- 9 The responsible management or care of land, property or resources is...Pg. 261 ESFA
- A Mismanagement
 - B Stewardship**
 - C Ownership
 - D Botany
- 10 When members of different species, or individuals of the same species, are required to share limited resources...pg. 230 ESFA
- A Competition exists**
 - B Commensalism exists
 - C Parasitism exists
 - D Mutualism exists
- 11 What factors can make a species more susceptible to extinction? Pg. 237 ESFA
- A Adaptive behavior
 - B Slow rate of reproduction**
 - C High fitness value
 - D No legs
- 12 Food, Water, Shelter & Safety are components of a...Pg. 311 MONR
- A Biotic community
 - B Ecosystem
 - C Niche
 - D Habitat**

- 13 A plant that completes its life cycle in 1 year is referred to as....Pg. 272 ESFA
- A Biennial
 - B Evergreen
 - C Annual**
 - D Perennial
- 14 A tree that sheds its leaves every year are classified as...Pg. 142 ESFA
- A Perennial
 - B Deciduous**
 - C Evergreen
 - D Annual
- 15 Evergreens produce what commercially important type of wood? Pg. 149 ESFA
- A Softwood**
 - B Sweetwood
 - C Hardwood
 - D Burntwood
- 16 The most commercially important evergreens are mostly...Pg. 142 ESFA
- A Deciduous
 - B Hardwoods
 - C Pulpwoods
 - D Conifers**
- 17 Silviculture is the art and science of...Pg. 154 ESFA
- A Silver mining
 - B Disease management
 - C Tree production**
 - D Range management
- 18 Which of the following is a component of soil texture? Pg. 51 MONR
- A Slope
 - B Silt**
 - C Elevation
 - D Peat moss
- 19 Which of the following is a common order for soil horizons starting from top to bottom? Pg. 51 MONR
- A OABC**
 - B OCBA
 - C CBAO
 - D ABCO

- 20 Which of the following are considered agents of biotic diseases? Pg. 174 ESFA
- A Fungi
 - B Bacteria
 - C Viruses
 - D All of the above**
- 21 Which of these is a benefit of prescribed fire? Pg. 277, MONR
- A Disease control**
 - B Sterilizes the soil
 - C Makes smoke
 - D None of the above
- 22 Which of the following is a component of the Fire Triangle? Pg. 282 MONR
- A Sunlight
 - B Fuel**
 - C Wind
 - D Rain
- 23 The most violent and dangerous of the forest fires are...Pg. 283 MONR
- A Ground fires
 - B Flank fires
 - C Crown fires**
 - D Surface fire
- 24 Movement of an animal out of a population is known as...Pg. 295 ESFA
- A Immigration
 - B Natality
 - C Mortality
 - D Emigration**
- 25 The spacing or dispersion of individuals within a population is termed...Pg. 292 ESFA
- A Distribution**
 - B Density
 - C Natality
 - D Age Structure
- 26 What percentage of the United States was covered by rangeland when Europeans first arrived on the east coast? ...Pg. 91 MONR
- A 50%
 - B 10%
 - C 25%**
 - D 15%

- 27 Sustainable agriculture refers to...Pg. 257 ESFA
- A Agricultural practices that are most economic
 - B Agricultural practices that will not deplete or damage the land resource**
 - C Agricultural practices that require frequent fertilization and herbicide application
 - D Agricultural practices that produce only forage crops
- 28 Which of the following gasses comprises about 21% of the earth's atmosphere? Pg. 62 ESFA
- A Nitrogen
 - B Air
 - C Carbon dioxide
 - D Oxygen**
- 29 Which of the following practices can aid in preventing and/or controlling erosion? Pg. 134 ESFA
- A No-till
 - B Contour farming
 - C Planting cover crops
 - D All of the above**
- 30 Water loss through pores in leaf surfaces is called...Pg. 89 ESFA
- A Transpiration**
 - B Sweating
 - C Condensation
 - D None of the above
- 31 Prolonged presence of water, hydric soils and presence of hydrophytic plants are characteristics of ...Pg. 196 ESFA
- A Shortgrass prairie
 - B Tallgrass prairie
 - C Wetland**
 - D A gully
- 32 What Asian plant, imported to help control erosion on road banks, proved itself to be highly invasive?...Pg. 86 MONR
- A Johnsongrass
 - B Kudzu**
 - C Little bluestem
 - D Buffalograss

- 33 What type of landfill design allows natural percolation of precipitation to pass through and into the underlying soil and rocks where leachate is neutralized by microorganisms and soil particles? : Pg. 112 MONR.
- A Canyon-fill landfill
 - B Trench landfill
 - C On-grade landfill
 - D Natural attenuation landfill**
- 34 The excessive increase of nutrients into a body of water is called: pg. 177, MONR
- A Eutrophication**
 - B Sedimentation
 - C Condensation
 - D Distillation
- 35 The concept of extracting freshwater from saltwater is called...Pg. 197 MONR
- A Distillation
 - B Desalinization**
 - C Sedimentation
 - D Condensation
- 36 The process by which nitrogen gas is converted to nitrates is called....Pg. 27-ESFA
- A Electrolysis
 - B Nitrification
 - C Nitrogen fixation**
 - D None of the above
- 37 The process by which plants convert water and carbon dioxide into sugar is called....Pg. 22 ESFA
- A Photosynthesis**
 - B Parentheses
 - C Transformation
 - D None of the above
- 38 Ecology is....Pg. 6 ESFA
- A The branch of science that deals with plant communities.
 - B The study of marine mammals
 - C The study of aquatic organisms
 - D The branch of science that deals with the relationships among living things and their environment.**

- 39 Heat buildup from the sun's rays passing through a clear object resulting in heat being trapped inside is known as...Pg. 67 ESFA
- A Radiation
 - B The greenhouse effect**
 - C Ozone effect
 - D None of the above
- 40 The replacement of one species by another within an ecosystem is called...Pg. 32 MONR
- A Balance of nature
 - B Biogeography
 - C Ecological succession**
 - D Community change
- 41 What atmospheric zone starts at the surface of the earth? Pg. 206 MONR
- A Stratosphere
 - B Thermosphere
 - C Troposphere**
 - D Mesosphere
- 42 Erosion that occurs from natural processes is called...Pg. 58 MONR
- A Geologic erosion**
 - B Accelerated erosion
 - C Gully erosion
 - D Rill erosion
- 43 Which of the following species is an endangered species? Pg. 315 MONR
- A Porcupine
 - B Mountain lion
 - C European starling
 - D Whooping crane**
- 44 What insect is particularly damaging in pine forests? Pg. 265 MONR
- A Grasshoppers
 - B Wasps
 - C A Beetle**
 - D A Moth
- 45 Which of the following is an anthropogenic emission? Pg. 208 MONR
- A Smoke from a wildfire
 - B Methane from animal manure
 - C Volcanic gas emissions
 - D Burning household garbage**

- 46 What does a hypsometer measure? Pg. 254 MONR
- A Tree diameter
 - B Tree density
 - C Tree height**
 - D None of the above
- 47 What type of tree requires fire for its seeds to germinate? PG 176 ESFA
- A Asher juniper
 - B Lodgepole pine**
 - C Live oak
 - D Shortleaf pine
- 48 In forestry, what type of cutting removes injured, diseased or insect-infested trees? Pg. 255 MONR
- A Sanitation cutting**
 - B Salvage cutting
 - C Liberation cutting
 - D None of the above
- 49 What type of soil usually forms hard lumps or clods when dry? Pg. 120 ESFA
- A Silt
 - B Clay**
 - C Loam
 - D Sand
- 50 In range management, what is an **AEU**? Pg. 194 ESFA
- A All Equine Units
 - B Any Ewe Utilized
 - C Animal Equivalent Units**
 - D None of the above

