Honors written final practice

Below is an article from the Desert Gazette

The desert contains many different ecosystems. Desert washes generally flow intermittently after heavy rains, a feast or famine of water that creates specific plant communities. Roadside water runoff can also create a microhabitat of its own. In areas around large boulder piles, vegetation is thicker and more diverse than in the open areas. Rain runs off boulders and collects around rock bases. This creates a moister habitat for plants such as golden bush, *Ericameria spp.*, and skunk brush, *Rhus trilobata*. The sacred datura, also called jimson weed or thorn apple, thrives in this water runoff, making it standout along roads.   
  
Unlike the sparse vegetation in most of the Mojave, plant life in washes is lush and deep-rooted. Plants range from shrubs such as the catclaw acacia, cheesebush, four-wing saltbush, and bush senecio to taller trees such as desert willow and cottonwood. Looking at the ground around the cheesebush one often discovers a small, purple-flowered plant looking much like a mushroom. This scaly-stemmed sand plant, pholisma arenarium, is a parasite. Its roots are imbedded in the roots of a nearby cheesebush or another host plant, from which it gets its nourishment.  
  
Catclaw acacia host a variety of species. The branches have clumps of desert mistletoe, a parasitic plant. Mistletoe attracts phainopepla, a small tufted black bird that eats--and disperses--its berries. Summer Tanagers mainly eat insects, especially bees and wasps, and berries. Its chief food is the berries of the Desert Mistletoe (Phoradendron californicum), but since these are only available seasonally in the northern parts of its range, it also eats the berries of other trees such as juniper and elderberry, and insects. It is an important vector for the mistletoe seeds. Bees are attracted to the fragrant flowers and from them produce a popular desert honey. Often the four- to five-inch round woven nests of the verdin, a small grey desert bird, can be clearly seen in the upper branches of the catclaw acacia.

Blacktail jackrabbit strictly herbivorous; graze and browse. They prefer grasses and forbs but will eat almost any vegetation that occurs in the area, up to about 51 cm (20 in) above the ground. Chew and Chew (1970) found 65% of the diet was shrub browse, and 30% was herbage. Diet changes with forage availability by season. Coprophagous (Flinders and Hansen 1972). Predators include coyotes, eagles, northern harriers, barn owls, red-tailed hawks, great horned owls, rattlesnakes, and gopher snakes. Competitors for food primarily include other grazers and browsers.

Coyotes are omnivorous opportunist, they eat primarily mice, rats, ground squirrels, gophers, lagomorphs, and carrion (Ferrel et al. 1953, Bekoff 1977). They will also take some insects, reptiles, amphibians, fruits, and occasionally birds, their eggs, and deer fawns. Locally, some may take sheep and domestic fowl. Searches and pounces, stalks and chases, and may dig out prey. It will hunt either solitarily, in pairs, or in small packs (family groups). Favors open habitats where it can chase down prey. Golden eagles, great horned owls, and mountain lions occasionally may kill coyotes. Coyotes host various ectoparasites (live outside on the body) and endoparasites (live inside the body) and occasionally may carry rabies.

1. Read the passage on page one and identify the following;
   1. the different types of organisms label them producer or consumer
   2. identify which trophic levels they belong to and explain why they belong to that trophic level.

Read the following paragraph and answer the questions

A student studied the effect of gibberellin, a plant hormone, on the growth of corn seedlings of the same height and species. A different concentration of gibberellin in a fixed volume of water was applied to each plant in seven equal groups containing 10 plants each. These plants were maintained under the same environmental conditions for a period of 25 days. At the end of this period, the height of each plant was measured. The data are shown in the table below.



1. Using the information in the data table, construct a line graph on the grid provided.
   1. Mark an appropriate scale on each axis.
   2. Label each axis with the appropriate label
   3. Make an appropriate title for the graph



1. Using one or more complete sentences, identify the control group, independent and dependent variables used in this investigation.
2. Using one or more complete sentences, explain how increasing the application amount of gibberellin from 0.05 to 0.50 mircrogram affects the height of corn seedlings.
3. Proper sanitation and hand washing is crucial in a doctor’s office. An independent lab tested the surfaces of the offices four times in two years. The first time they tested the office they found six different strains bacteria. They made their report to the office. The office promptly increased the strength of their disinfectant. The second time they found two strains of bacteria. After this the office staff switched a different disinfectant. The third and forth times they tested the office and they found only one strain. Explain what happened to the bacteria in terms of variation, fitness, genes, alleles and adaptation.