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SEAT No. \_\_\_\_\_

No. of Printed Pages : 2

SARDAR PATEL UNIVERSITY  
T.Y. B.Sc. (6<sup>th</sup> SEMESTER) EXAMINATION  
Monday, 25<sup>th</sup> March, 2019  
10.00 AM to 01:00 PM  
Environmental Science  
US06CENV01 Environmental Microbiology

Total Marks: 70

Q.1. Write the correct answer in the answer sheet

(10)

1. Carbonification is a part of \_\_\_\_\_ biogeochemical cycle  
(a) Iron (b) Carbon (c) Nitrogen (d) Phosphorus
2. Chemolithotrophs are found in \_\_\_\_\_ soil  
(a) Sandy (b) Swampy (c) Clay (d) Rocky
3. \_\_\_\_\_ organisms are mostly used in Vermicomposting  
(a) Red Wiggle (b) Red Algae (c) Bacteria (d) Fungi
4. The medicinal plant \_\_\_\_\_ is used as biocide  
(a) Ocimum sanctum (b) Azadirachta indica (c) Hyptis suaveolens (d) All of these
5. Mycorrhiza is an association of \_\_\_\_\_ and roots of higher plants  
(a) Bacteria (b) Fungi (c) Earthworm (d) Algae
6. The amino acid \_\_\_\_\_ is found deficient in wheat, rice and legumes  
(a) Tryptophan (b) Methionine (c) Lysine (d) Threonine
7. The *Agaricus bisporus* is commonly called as \_\_\_\_\_ mushroom  
(a) Dhingri (b) Paddy straw (c) Button (d) Oyster
8. \_\_\_\_\_ is cellulosic material of sugar cane produced after juice extraction  
(a) Paraffin (b) Liquor (c) Molasses (d) Bagasse
9. \_\_\_\_\_ is example of semi perishable food  
(a) Potato (b) Rice (c) Meat (d) Milk
10. Whey is waste product of \_\_\_\_\_ industry  
(a) Food (b) Dairy (c) Chemical (d) Paper mill

(1)

(P.T.O)

- Q.2. Answer the following in brief (Any 10) (20)**
1. Explain the process of Nitrogen fixation
  2. Draw a diagram showing Iron Cycle
  3. What are Saprotrophs ?
  4. Define the term 'Mycorrhiza'
  5. Write any two uses of Biocides
  6. Explain the importance of Biofertilizers
  7. Discuss Aquatic Biomass
  8. Explain the benefits of Bio diesel
  9. Write biomass resources for fuel generation
  10. State the nutritional value of Mushroom
  11. Explain spawning
  12. Explain the term –Single Cell Protein
- Q.3. (a) Explain the Nitrogen cycle in brief (05)**  
**(b) Write in detail about Sulphur cycle (05)**
- OR**
- Q.3. (a) Write in brief about Chemolithotrophs (05)**  
**(b) Explain Phosphorus cycle in brief (05)**
- Q.4. Write in detail about Biocides and their significance (10)**
- OR**
- Q.4. Give a detailed account of Vermicomposting (10)**
- Q.5. (a) What is the composition of Biomass? Explain (06)**  
**(b) Write a note on Biodiesel production using Jatropha (04)**
- OR**
- Q.5. Write a note on 'Bioethanol fuel and add a note on its advantages and disadvantages (10)**
- Q.6. (a) Give an illustrated account on Mushroom cultivation (06)**  
**(b) Explain the terms- Food intoxication, Food infection (04)**
- OR**
- Q.6. (a) Write a brief note on Salmonellosis and Staphylococcal poisoning (06)**  
**(b) Discuss the role of micro organisms in food spoilage (04)**