

SEAT No. _____

No. of Printed Pages : 2

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[40/A14]

SARDAR PATEL UNIVERSITY
T. Y. B.Sc, (SIXTH SEMESTER) EXAMINATION

2018

Monday, 26th March

10.00 am to 1.00 pm

US06CENV01 Environmental Microbiology

Total Marks :70

Q.1. Select the correct answer and write in answer sheet

[10]

1. The leguminous plants show ____ biogeochemical cycle
(a) Iron (b) Sulphur (c) Nitrogen (d) Carbon
2. Thiobacter bacteria are involved in ____ cycle
(a) Sulphur (b) Nitrogen (c) Carbon (d) Phosphorus
3. Volcanic eruptions are a major source of ____
(a) Carbon (b) Sulphur (c) Nitrogen (d) Iron
4. Mycorrhizae is an association of Plant roots with ____
(a) Algae (b) Fungi (c) Bacteria (d) Virus
5. The algae used in biofertilizer is ____
(a) Anabaena (b) Volvox (c) Batrachospermum (d) Zygnema
6. Bioethanol can be produced using ____
(a) Proteus (b) Bacilli (c) Saccheromyces (d) Salmonella
7. Biofuel burns upto ____ cleaner than diesel fuel from fossil fuel
(a) 55% (b) 65% (c) 75% (d) 85%
8. Wheat lacks amino acid ____
(a) Lysine (b) Tryptophan (c) Valine (d) Methionine
9. The use of yeast in baking industry results in fermentation and ____ production
(a) Oxygen (b) nitrogen (c) carbon dioxide (d) sulphur dioxide
10. Biodiesel is ____
(a) Non degradable (b) Degradable (c) Partially degradable (d) Biodegradable

(1)

(P.T.O.)

Q.2. Answer the following in brief (Any 10)

[20]

1. What are saprotrophs? Explain giving examples
2. Write a note on terrestrial Iron Cycle
3. Give a schematic presentation of Phosphorus cycle
4. Write the significance of Mycorrhiza
5. What are Biofertilizers ?
6. Define the term 'Vermiculture'
7. Explain Biomass and Bioenergy
8. Discuss the significance of Biofuel
9. Write the composition of Biomass
10. Explain the term 'Single Cell Protein'
11. What are the advantages of microbial protein over plant and animal protein ?
12. Enlist the organisms used for SCP production

- Q.3. (a) Give a brief account of Carbon cycle with micro organisms involved [05]
(b) Give a schematic presentation of Sulphur cycle [05]

OR

- Q.3 (a) Discuss Nitrogen cycle and role of various micro organisms associated with [05]
(b) Explain about prototrophs and parasites [05]

- Q.4. (a) Write a brief note on Biopesticides [05]
(b) Explain about Ecto mycorrhiza and endo micorrhiza [05]

OR

- Q.4 (a) Write about algal biofertilizers [05]
(b) Describe the process of vermicomposting [05]

- Q.5. (a) What is biodiesel ? Discuss the benefits of Biodiesel [05]
(b) Write in brief about sources of biomass [05]

OR

- Q.5 Write a detailed account on Morphology, cultivation and significance of *Jatropha* plant [10]

- Q.6. (a) Discuss the production of *Chlorella* and *Spirulina* for SCP production [05]
(b) Give a brief account on food spoilage [05]

OR

- Q.6 Discuss the process of Mushroom cultivation. Add a note on its nutritional value [10]

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