

(43 & A-20) Seat No.: _____ No. of Printed Pages : 2

SARDAR PATEL UNIVERSITY

T.Y. B.Sc (6th Semester) EXAMINATION

Monday, 27th March 2017

10.00 a.m. to 1.00 p.m.

Environmental Science

US06CENV01 Environmental Microbiology

Total Marks :70

Q1. Write the correct answer in given answer sheet (10)

1. Volcanic eruptions are a major source of _____
(a) Carbon (b) Sulphur (c) Nitrogen (d) Iron
2. Ammonification is a part of _____ cycle
(a) nitrogen (b) sulphur (c) Iron (d) Phosphorus
3. Vermicoposting involves the organism _____.
(a) algae (b) fungi (c) earthworm (d) bacteria
4. _____ is a biocide.
(a)Neem (b)Tulsi (c) both a&b (d)none
5. The algae used in biofertilizer is _____.
(a) Anabaena (b) Volvox (c) Batrachospermum (d)Zygnema
6. Biodiesel requires _____ modification to diesel engine for use
(a) Extensive (b) minor (c) complete (d) no
- 7.The byproduct of diesel extraction from Jatropha are _____.
(a) Oil cake (b) Glycerine (c) Oil cake& glycerine (d) None of these
- 8.Fermentation process results in production of alcohol and _____ gas
(a) Oxygen (b) Carbon dioxide (c) Chlorine (d) Methane
9. Out of 20 amino acids only _____ are essential amino acids
(a) five (b) Eight (c) Eleven (d) fourteen
10. _____ is also called as Baker's yeast
(a) Candida (b) Saccheromyces (c) Penicillium (d) Torula

Q.2 Answer in brief (Any Ten) (20)

1. What are Saprotrophs? Explain giving examples
2. Make a schematic diagram of Iron cycle.
3. Give an account of Phosphate solubilising bact
4. What is Ectomycorrhiza?
5. Name some biofertilisers.
6. Write a note on Biocide
7. State in brief the resources of Biomass for fuel generation
8. Give a brief account of Jatropha plant
9. What are the advantages of Biodiesel ?
10. Explain Composting in Mushroom cultivation
11. Which are the organisms used for SCP production?
12. What is Single Cell Protein ?

Q3. (a) Discuss the Carbon cycle with suitable diagram (05)
(b) Write a descriptive note on Sulphur cycle. (05)

OR

Q3. (a). Explain in detail the nitrification process with microbes involved (05)
(b) Write in brief about Saprotrophs and Lithotrophs. (05)

Q.4. Give a detailed account on Biofertilisers. (10)

OR

Q.4. Describe the process of making Vermicompost. (10)

Q.5. (a) What is Biofuel ? Discuss the salient features of Biodiesel (05)

(b) Write a brief note on Aquatic Biomass (05)

OR

Q.5 (a) Discuss the morphology and cultivation of Jatropha. (05)

(b) Write a note on Biogas production (05)

Q.6. Discuss in detail the process of Mushroom cultivation (10)

OR

Q.6 (a) Discuss the production of *Chlorella* for SCP Production (05)

(b) Write a brief note on Food spoilage (05)

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