

Reg. No. : .....

Code No. : 10641 E Sub. Code : SSZO 4 B/  
ASZO 42

(CBCS) DEGREE EXAMINATION, APRIL 2022

Fourth Semester

Zoology – Main

Skill Based Subject — VERMITECHNOLOGY

For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

Certain species of earthworms can ingest organic waste rapidly and fragment them into much fine particles by passing them through ————

- (a) gizzard (b) anus  
(c) mouth (d) buccal cavity

*Drilus eugeniae* is an example of

- (a) endogeic (b) epigeic  
(c) anecic (d) hydrogeic

7. Potential benefits of vermicomposting is

reducing pollution

excessive accumulation of earthworms within potted plants disturbs root growth and nutrient supplies to plants

some earthworm species have a role in spreading, development of parasites and pathogens

surface dwelling earthworms have habits of pulling leaves and damage some plants like potted plants

8. Vermiwash is the ———— watery extract of compost, the wash of the earthworms present in the medium and considered as a wonder-tonic in agriculture.

- (a) leafy green coloured  
(b) honey-brown coloured  
(c) blood red coloured  
(d) sky blue coloured

9. It is found that the increased soil phosphatase activity was mainly due to phosphate production by ———— in vermibed.

- (a) microorganisms (b) earthworm  
(c) millipede (d) centipede

3. Name the culture of earthworm under controlled condition in large is called as ————

- (a) Aquaculture (b) Sericulture  
(c) Apiculture (d) Vermiculture

4. Which one is South Indian species of earthworm used in vermicomposting process?

- (a) *Perionyx excavatus*  
(b) *Pontoscolex corethrurus*  
(c) *Eisenia fetida*  
(d) *Eisenia Andrei*

5. Which of the following is not raw material required for preparing composts?

- (a) Cow dung  
(b) Weed biomass  
(c) Dry straw and leaves  
(d) Plastic and glass

6. The bedding for vermicomposting systems must be able to retain both moisture and ———— while providing a place for the worms to live.

- (a) air (b) light  
(c) water (d) radiation

Page 2 Code No. : 10641 E

10. Select the financial agency to support vermiculture is

- (a) BERI (b) KVB  
(c) IOB (d) SBI

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Outline the classification of earthworms based on feeding behaviour/habits.

Or

(b) Elucidate the female reproductive system of earthworm with neat diagram.

12. (a) Explain the various methods of culture of earthworm.

Or

(b) List out any two exotic cultivable species of earthworms used in vermicomposting.

13. (a) Comment on the term composting, vermicomposting, vermiculture and vermotechnology.

Or

- (b) Describe the various organic waste materials used for vermicomposting.

14. (a) Explain the procedure for preparation of vermiwash.

Or

- (b) "Vermicompost has many advantages over chemical fertilizers" – Justify.

15. (a) Explain the interaction of earthworm with other organism particularly role of microbes in vermicomposting.

Or

- (b) List out any five large scale manufacture of vermicompost in Tamilnadu.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain the ecological types of earthworms with suitable examples.

Or

- (b) Describe the different stages in life cycle of earthworm with illustration.

Page 5 Code No. : 10641 E

17. (a) List out any five earthworms used for vermicomposting.

Or

- (b) Discuss the various methods of collection of earthworms.

18. (a) List out the requirements for successful production of vermicompost.

Or

- (b) Describe different methods of vermicomposting which you have studied.

19. (a) Explain the therapeutic (medical) values of earthworms giving reasons.

Or

- (b) Highlight the role of earthworm in solid waste management.

20. (a) Explain the any two financial agencies to support vermiculture.

Or

- (b) How to harvest and packaging the vermicompost as final step in vermicomposting process?

Page 6 Code No. : 10641 E