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Reg. No. :

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B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2024

Fourth Semester

Zoology

Skill Based Subject – VERMITECHNOLOGY

(For those who joined in July 2020 only)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Earthworms have a tube-like arrangement or cylindrical shaped and reddish-brown.
(a) segmented body (b) non segmented body
(c) chitinous body (d) all the above
2. There are _____ types of nephridia present in earthworms.
(a) three (b) four
(c) five (d) six

3. Common Indian earthworms are Lumbricus and _____.
(a) Drawida nilamburensis
(b) Pheretima
(c) (a) and (b) correct
(d) (a) and (b) not correct
4. Vermiculture is a technique based on utilizing some species of earthworms to convert _____ into Vermicompost.
(a) sericulture waste (b) chemical waste
(c) inorganic waste (d) organic waste
5. The vermi castings contain high amounts of _____ and magnesium.
(a) nitrogen (b) phosphorus
(c) potassium (d) all the above
6. Vermicompost process will progress properly by starting the process with a C:N ratio _____ and it will decrease during the process.
(a) around 25-30 (b) around 30-35
(c) around 35-45 (d) around 45-50

7. Vermicompost can be stored for one year without loss of its quality, if the moisture is maintained _____ level.
- (a) around 40% (b) around 50%
(c) around 60% (d) around 70%
8. Vermifiltration (Lumbrifiltration) is a liquid state vermin-conversion process to treat.
- (a) sludge
(b) domestic
(c) industrial wastewater
(d) all the above
9. What is the raw material of vermi?
- (a) Water
(b) Cow dung
(c) Thatch Roof
(d) All the above
10. How do I store vermicompost? It is best to store compost in a _____ while not letting the material completely dry out.
- (a) cool place
(b) dry place
(c) providing air flow
(d) all the above

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) How does earthworm eat food?
- Or
- (b) Where does digestion take place in an earthworm?
12. (a) How many types of earthworms are there in India?
- Or
- (b) How do earthworms collect from soil and native places?
13. (a) Discuss about materials required for vermicomposting.
- Or
- (b) How do you make heap compost manure?
14. (a) Describe the role of earthworms in agriculture.
- Or
- (b) How much protein is in an earthworm?

15. (a) Is vermicomposting a profitable business?

Or

(b) How do you start a vermicomposting business?

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Why earthworm is considered a farmer's friend? Discuss.

Or

(b) Write about the life cycle of earthworm.

17. (a) Explain in briefly the different methods of vermicomposting.

Or

(b) How do you collect and preserve the earthworms?

18. (a) Which method is used for vermicompost preparation?

Or

(b) How do earthworms help to convert biodegradable solid waste into manure?

19. (a) The earthworm is used as medicine in Ayurveda and other?

Or

(b) How you can prepare the Vermiwash at your home?

20. (a) Is vermicompost business profitable in India? How do you know if vermicompost is real?

Or

(b) What are the physical chemical and biological changes caused by earthworm?