

- CO:3 6. What is the first phase in the basic vermicomposting process?
K:1 (a) Thermophilic phase (b) Initial pre-composting phase
(c) Maturing Phase (d) Stabilization phase
- CO:4 7. Which harvesting method relies on worms migrating to new food
K:1 through screens?
(a) Manual sorting (b) Migration method
(c) Grinding method (d) Freezing
- CO:4 8. Which method for harvesting earthworms involves hand-sorting
K:1 under bright light?
(a) Manual method (b) Migration method
(c) Packing technique (d) Sideways method
- CO:5 9. What is vermiculture primarily described as in Biotechnology?
K:1 (a) Chemical synthesis
(b) Cultivation of worms for waste recycling into soil amendments
(c) Genetic modification
(d) Irrigation technique
- CO:5 10. For fruit trees, What is a typical vermicompost application rate
K:1 depending on age?
(a) 100-150 g per tree (b) 8-10 kg per tree
(c) A ton per tree (d) None needed

PART - B (5 X 5 = 25 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not exceed 250 words.

- CO:1 11. (a) Explain the definition and classification of Vermiculture.
K:2
(OR)
(b) Explain the criteria for selecting appropriate earthworm species for different vermicomposting scenarios.
- CO:2 12. (a) Apply life cycle knowledge to recommend monitoring and
K:3 intervention steps based on physiology indicators.
(OR)
(b) Describe a step-by-step rearing protocol for *Eudrilus eugeniae*, applying concepts of its reproductive potential and vital cycle to achieve annual production targets.

CO:3 13. (a) Design continuous flow system for kitchen waste.

K:3

(OR)

(b) Adapt wedge system for industrial wastes: explain angle construction, migration monitoring, and harvest timing.

CO:4 14. (a) Apply packing post-migration harvest: specify containers, ventilation, analysis tests.

K:3

(OR)

(b) Analyze rodent-bird impacts: compare prevention via barriers vs. site design.

CO:5 15. (a) Analyze how vermicastings improve soil structure in organic farming.

K:4

(OR)

(b) Break down vermicompost quantities for fruits/flowers vs. grains: evaluate soil type influences on optimal dosing.

PART - C (5 X 8 = 40 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not exceed 600 words.

CO:1 16. (a) Convert textile mill sludge via worms: Bio-transformation plan, cost-benefit analysis.

K:3

(OR)

(b) Fix basic vermicompost failure: apply soil factor corrections, residue mixing, restart protocol with output projection.

CO:2 17. (a) Analyze Eisenia fetida's Taxonomy Anatomy, physiology and Reproduction.

K:3

(OR)

(b) Analyze the methods used to identify Earthworm species.

CO:3 18. (a) Analyze how different feed materials used in vermitech systems influence earthworm activity.

K:4

(OR)

(b) Analyze mechanism synergies: Earthworm vs Microorganisms.

CO:4 19. (a) Critique pest management in Vermitechnology, defend best practice.

K:5

(OR)

(b) Evaluate separation techniques, recommend best.

CO:5 20. (a) Evaluate value-added products: vermiwash vs. tea, critique
K:5 market potential/sustainability.

(OR)

(b) Evaluate vermicompost in vegetables vs. grains: judge
nutrient uptake, recommend optimal doses.