VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
M.TECH -DEGREE EXAMINATIONS- APR/MAY - 2019
IRRIGATION, WATER MANAGEMENT AND RESOURCE ENGINEERING
FOURTH SEMESTER
AGRICULTURAL ECONOMICS
(Candidates admitted under 2017 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   What are the three foundation which the study of economics rest on?

2   List out the basic skills of agricultural economists

3   What is meant by surplus

4   Write down the discounting techniques in macro economics

5   Define total product

6   Briefly explain theory of production

7   Define – Typology

8   Differentiate microeconomics and farm economics

9   What is welfare analysis?

10   Write short note on roll of welfare economics

PART-B (5 x 16 = 80)

11 a.
What are the five basic economic decisions?
OR
b.
What is agricultural economics?

12 a.
What are the   types of Agricultural policy and explain
OR
b.
Write down the objectives of macro economics

13 a.
Explain the conditions of perfect competition
OR
b.
Explain the production function

14 a.
What is a cooperative R types –explain

(P.T.O)

OR

b.

Give in detail about farm credit system.

15 a. Write short notes on
 i) Welfare analysis ii) Property rights

OR

b.

Give a brief notes in private and social benefits.

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IRRIGATION, WATER MANAGEMENT AND RESOURCE ENGINEERING
FOURTH SEMESTER
ENVIRONMENTAL ASPECTS OF WATER RESOURCES
(Candidates admitted under 2017 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer ALL questions
Part-A (10 x 2 =20 Marks)

1   Mention any types of organism in lakes.

2   What is National policy?

3   Differentiate between food chain and food web.

4   Name two Impact on Land

5   What in Eutrophication?

6   Define diffused sources

7   Give a case on Surface water

8   Write short notes on Baseline survey

9   Write short notes on data bases for Environment

10   What is the basic information?

PART-B (5 x 16 = 80)

11 a.
Discuss briefly about community Ecology.

OR

b.
Explain about Biotic and Abiotic components in Eco system.

12 a.   Write short notes on with diagram
a. Hydrologic cycle b. cabon cycle

OR

b.   Write short notes on
a. Autocology
b. Synecology

13 a.
Describe briefly about suspended and dissolved solids affect water quality

(P.T.O)

OR

b.

Explain the sources of water pollution.

14 a. Write short notes on

a. Matric Method   b. Network process

OR

b.

What the factors to be considered in Hydro environmental in Hydro project ?

15 a.

Explain the various types of Dams in detail?

OR

b.

Explain any two water shed development schemes executed by Indian government.

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IRRIGATION, WATER MANAGEMENT AND RESOURCE ENGINEERING
THIRD SEMESTER
IRRIGATION SYSTEMS MANAGEMENT
(Candidates admitted under 2017 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   How can you define system?
2   Define water management
3   Briefly explain the scope of Operation Research in development planning
4   How can you define bench terracing?
5   What is Deterministic Dynamic Programming
6   How can you define decision making.
7   Whose made the first application of simulation in programming
8   Classify the different types of dynamic programming.
9   Write down the merits of simulation
10   How can you define Monte carion?

PART-B (5 x 16 = 80)

11 a.
Write short notes on : I) Iconic Models II)Analogue Models.
OR
 b.
Explain the classification schemes of Models

12 a.
Explain Concept of duality
OR
 b.
Discuss briefly the assumption of Linear Programming model.

13 a.
Explain briefly deterministic and probabilistic dynamic programming.
OR
 b.
Write short notes on: i) Stage (ii) State (ii) Bellmans principle.

14 a.
Generate the random number by mixed congruence method   a = 16 b = 18 and m = 23.
OR

(P.T.O)

b.

Describe the limitations of Simulation Technique.

15 a.

Explain the application of Linear programming in Irrigation system management.

OR

b. Write down the uses of the following:1) Dynamic programming
2) Linear programming

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IRRIGATION, WATER MANAGEMENT AND RESOURCE ENGINEERING
THIRD SEMESTER
DRAINAGE ENGINEERING AND LAND MANAGEMENT
(Candidates admitted under 2017 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Mention the demerits of water logging.
2   What is meant by water table?
3   Write short notes on photosynthesis
4   Write short notes sub-surface flow into drains.
5   What is the use of peizometer?
6   How can you define drainage density?
7   What is meant by surface drain?
8   How can you define field ditches?
9   What is meant by soil reclamation?
10   What precautions will you adopt to prevent salinity of irrigated land?

PART-B (5 x 16 = 80)

11 a.   Classify the different methods of aligning tile drains.
OR
   b.   Briefly discuss the methods of sub surface drainage of irrigation land.

12 a.   Explain in detail sub-surface drainage problems
OR
   b.   What are principles adopted in surface drainage

13 a.   Discuss whether it is possible to design the channel dimensions of a surface drain by Lacey's Regime equation.
OR
   b.   Discuss in detail about drainage criteria adopted in other countries.

14 a.   Classify the field ditches. Explain in detail any 3 methods.
OR
   b.   What are the problems having in the drainage system. How to rectify?

15 a.   Explain in detail about different types of leaching method.
OR
   b.   Explain in detail about soil salinity and solidity.

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IRRIGATION, WATER MANAGEMENT AND RESOURCE ENGINEERING
THIRD SEMESTER
PARTICIPATORY IRRIGATION MANAGEMENT
(Candidates admitted under 2017 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   How the sociology as a science
2   What are the functions of PIA
3   Write short note on conflict management
4   Write any two benefits of farmer's participation
5   Define acquisition of water
6   Write short note on context of participation
7   Define ownership the farmer organization
8   What are an form development works?
9   What is the need training for new farmers the association activities
10   Write short notes on bureau tic re orientation.

PART-B (5 x 16 = 80)

11 a.   What are the constraints in implementation of PIM?
OR
   b.   Describe about the concept of farmers participation

12 a.   Write short notes on following
          a).Greater production b). Improved water distribution c). Reduction in conflict
OR
   b.   Describe the farmer participation with farmer organization

13 a.   Explain about operation and organisation in irrigation   system
OR
   b.   List out the role of water users in irrigation   management

14 a.   What are the relationship between users groups and local government ?
OR
   b.   Write short notes on
          a).Experimentation b). Phasing c). Flexibility

15 a.   Expand NIA and its functions
OR
   b.   Describe in detail about agency organization.

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