



UNIVERSITY OF WEST ATTICA
FACULTY OF ENGINEERING
DEPARTMENT OF ELECTRICAL AND
ELECTRONICS ENGINEERING

M.Sc. by Research in Electrical and Electronics Engineering

MRES.B.02.06 Special Control Schemes in Wireless Sensor Networks

Sample Examination Paper

Question 1: (10 Marks)

Describe the structure of a typical wireless node.

Explain the role of each one of the standard and the auxiliary components that a wireless node may incorporate.

Question 2: (10 Marks)

Describe at least two examples of the use of WSNs in each one of the following domains:

- a. Smart Cities
- b. Flora and Fauna
- c. Industry

Question 3: (20 Marks)

Expound the main weaknesses and problems of WSNs.

Question 4: (15 Marks)

Explain what the causes of the energy waste in WSNs are.

Question 5: (15 Marks)

Describe the types of energy harvesting in WSNs.

Question 6: (10 Marks)

Explain what the difference between congestion avoidance algorithms and congestion control algorithms is.

Question 7: (10 Marks)

Explain the different types of coverage in WSNs.

Question 8: (10 Marks)

Explain the use of multiobjective algorithms in WSNs. Give at least two examples.