



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – COMPUTER SCIENCE

THIRD SEMESTER – NOVEMBER 2023

PCS3MC04 – WIRELESS ADHOC NETWORKS

Date: 07-11-2023

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

SECTION A – K1 (CO1)

Answer ALL the questions

(10 x 1 = 10)

1 Fill in the blanks

- a) Wireless routing protocol is an example of _____ .
- b) Classification of MAC Protocol consist of _____ .
- c) A highly adaptive, efficient, loop-free and scalable _____ routing protocol based on link reversal algorithm.
- d) In the _____, the agent advertisement messages are broadcast by gateway nodes and forwarded to the whole adhoc network.
- e) The _____ is concerned with establishing end-to-end connections over the network.

SECTION A – K2 (CO1)

2 Answer the following

- a) Define adhoc network.
- b) List any 2 design goals of MAC -protocol for adhoc networks.
- c) Differentiate proactive and reactive routing protocols.
- d) What is multicast routing?
- e) Where is network layer solution used for QoS?

SECTION B – K3 (CO2)

Answer any THREE of the following

(3 x 10 = 30)

- 3 Analyze the major issues to be considered for successful adhoc wireless internet
- 4 Illustrate and explain the following main issues of designing a MAC protocol
 - 1. Quality of Service (QoS)
 - 2. Hidden and exposed node problem
- 5 Write in detail about(CGSR) Cluster-head Gateway Switching Routing Protocol.
- 6 Explain issues in designing multicast routing protocol.
- 7 Summarize the issues and challenges in providing QoS in adhoc networks

SECTION C – K4 (CO3)**Answer any TWO of the following** (2 x 12.5 = 25)

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| 8 | List the applications of wireless adhoc network and explain with examples. |
| 9 | Differentiate between cellular network and adhoc wireless network. |
| 10 | Inference the on-demand routing protocol by mentioning its advantages and disadvantages. |
| 11 | Summarize the classification of multicast routing protocols with example. |

SECTION D – K5 (CO4)**Answer any ONE of the following** (1 x 15 = 15)

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| 12 | Explain the classification of MAC protocols with suitable example. |
| 13 | Evaluate Power aware routing protocol with an example. |

SECTION E – K6 (CO5)**Answer any ONE of the following** (1 x 20 = 20)

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| 14 | Discuss the following networks with proper diagrams
A) Wireless mesh network
B) Hybrid wireless network |
| 15 | Elaborate the issues and design goals of transport layer protocol for adhoc networks. |

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