

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
M.TECH -DEGREE EXAMINATIONS- APR/MAY - 2019
EMBEDDED SYSTEM TECHNOLOGY
SECOND SEMESTER
DESIGN OF EMBEDDED SYSTEMS
(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 steps involved in CVPD?
- 2 What is meant by verification & validation phase?
- 3 Define transmission gate style.
- 4 Define software duality.
- 5 Define watch dog timer.
- 6 List some merits of caches.
- 7 What are the benefits of real time trace?
- 8 How to specify the clock frequency?
- 9 Define functional test.
- 10 What are all the most important tools used for regression testing?

PART-B (5 x 16 = 80)

- 11 a. Discuss bench marking process in detail.

OR
- b. Discuss about i) CVPD analysis ii) Hardware and Software Debugging Tools
- 12 a. With neat example explain how closely hardware description languages relate to programming languages.

OR
- b. Explain about system startup?
- 13 a. With neat diagram, explain programmable interrupt controllers.

OR
- b. Explain about remote debugging.
- 14 a. Explain about timing constraints.

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OR

b. Discuss triggers with its various types.

15 a. Explain performance testing in detail with its types.

OR

b. Discuss about automated testing and list its advantages.

Sl.No. E-601

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M.TECH -DEGREE EXAMINATIONS- APR/MAY - 2019
EMBEDDED SYSTEM TECHNOLOGY
SECOND SEMESTER
DATA COMMUNICATION AND NETWORKS
(Candidates admitted under 2017 Regulations-CBCS)

Time : Three Hours

Maximum Marks:100 Marks

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

- 1 Define WWW.
- 2 Draw HTTP Message Format.
- 3 Compare Go back n and selective repeat protocol.
- 4 Draw a Timing diagram for TCP during slow rate.
- 5 Draw IPv4 datagram format.
- 6 What is mean by routing information protocol?
- 7 What are the types of links?
- 8 What is DHCP?
- 9 Define authentication?
- 10 Define “streaming live audio and video”.

PART-B (5 x 16 = 80)

- 11 a. Explain in detail about connection oriented service.

OR
- b. Discuss about ISPS.
- 12 a. Explain in detail about Connectionless Transport.

OR
- b. Compare GBN and SR Protocols with suitable diagram.
- 13 a. Discuss about IPv6.

OR
- b. Explain broadcast routing, with relevant diagrams.
- 14 a. Explain CRC techniques with suitable example.

OR

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- b. What is meant by error detection and correction and explain check summing method in detail.
- 15 a. Discuss in detail about “streaming stored audio and video”.

OR

- b. Explain in detail about RTP.

VINAYAKA MISSIONS RESEARCH FOUNDATION
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M.E -DEGREE EXAMINATIONS- APR/MAY - 2019
EMBEDDED SYSTEM TECHNOLOGY
THIRD SEMESTER
ELECTIVE - REAL TIME SYSTEMS
(Candidates admitted under 2016 Regulations-CBCS)

Time : Three Hours

Maximum Marks:100 Marks

Answer **ALL** questions

Part-A (10 x 2 =20 Marks)

- 1 What is task management?
- 2 Write the applications of real time systems?
- 3 What is predictability in database?
- 4 Define Redundancy.
- 5 Define Response time.
- 6 Define durability
- 7 What are the advantages of optical fibers?
- 8 What is wormhole routing?
- 9 Define contention based protocols
- 10 What is information redundancy?

PART-B (5 x 16 = 80)

- 11 a. Explicate the performance measures for Real time systems.
OR
b. Write a detailed note on the task assignment.
- 12 a. Explain facilitating hierarchical decomposition.
OR
b. Write a detailed note on the multitasking
- 13 a. Describe the transaction aborts .
OR
b. Explain the shared memory access diagram in hard real time systems .
- 14 a. Explain in detail about protocols
OR
b. Write a detailed note on the Redundancy
- 15 a. With a neat diagram write about interrupt latency in evaluation techniques.
OR
b. Explain the software error models

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M.E -DEGREE EXAMINATIONS- APR/MAY - 2019
EMBEDDED SYSTEM TECHNOLOGY
FIFTH SEMESTER
ELECTIVE - MOBILE COMPUTING
(Candidates admitted under 2016 Regulations-CBCS)

Time : Three Hours

Maximum Marks:100 Marks

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

- 1 List out the features of code division multiple access.
- 2 Define CDMA.
- 3 List out the point co-ordination function.
- 4 What is an AD-HOC network?
- 5 Define damping.
- 6 Define the dynamic source routing
- 7 Why does I-TCP isolate problems on the wireless link?
- 8 Define the mobile TCP in detail.
- 9 Define hoarding.
- 10 Mention the use of post PDU .

PART-B (5 x 16 = 80)

- 11 a. Compare the SDMA, TDMA, FDMA and CDMA.
OR
b. Explain about the digital audio broadcasting.
- 12 a. Explain about the MAC management.
OR
b. Describe the reference model and configuration of Hiper LAN
- 13 a. Describe about the destination distance vector.
OR
b. Explicate about the flat ADHOC routing with diagram.
- 14 a. Enlighten about the traditional TCP.
OR
b. Elucidate about the selective transmission with example.
- 15 a. Give explanation about the Wireless transaction protocol.
OR
b. Explain about the dynamic DNS with neat diagram.

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M.E -DEGREE EXAMINATIONS- APR/MAY - 2019
EMBEDDED SYSTEM TECHNOLOGY
FIFTH SEMESTER
ELECTIVE - ADVANCED ROBOTICS & AUTOMATION
(Candidates admitted under 2016 Regulations-CBCS)

Time : Three Hours

Maximum Marks:100 Marks

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

- 1 Define robot motion.
- 2 Define robot drive system?
- 3 Represent a vector in a space.
- 4 Define Link and Joint?
- 5 Mention the significance in finding the robot dynamics.
- 6 Mention the steps involved in the computational algorithm of N-E Equations.
- 7 Mention the categories of robotics application.
- 8 Define process rationalization.
- 9 What is magazine feeder?
- 10 What is part mating?

PART-B (5 x 16 = 80)

- 11 a. With neat diagram explain the end effectors used in robots.

OR

- b. What are the functions of Manipulator? Discuss the working of robot manipulator arm with a neat sketch.

- 12 a. Derive kinematic equation for manipulators.

OR

- b. Derive the decision equation for the arm configuration indicators.

- 13 a. Derive the motion equation of two link robot arm using L-E equations of motions.

OR

- b. Derive recursive equations of motion for the manipulators.

- 14 a. Explain the following robotic applications (i) Forging related operations, (ii) Machining operations and (iii) Stamping Press Operations.

OR

- b. Explain in detail about the sensors in robotic arc welding.

- 15 a. Explain single work station assembly.

OR

- b. Discuss in detail about vision inspection system.
