



Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Question Paper Code : 40973

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2018

Seventh/Eighth Semester

Electronics and Communication Engineering

EC 6703 – EMBEDDED AND REAL TIME SYSTEMS
(Common to Biomedical Engineering/Computer Science and Engineering/
Electronics and Communication Engineering/Medical Electronics)
(Regulations 2013)

Maximum : 100 Marks

Time : Three Hours

Answer ALL questions

(10×2=20 Marks)

PART – A

1. What are the basic sources of CMOS power consumption ?
2. List the functions of ARM processor in supervisory mode.
3. Differentiate Harvard and Von Neumann architecture.
4. What is the basic building block of most bus protocol ?
5. Define context switching in RTOS.
6. Illustrate the interconnect networks developed for distributed embedded systems.
7. What do you mean by accelerators in embedded multiprocessor ?
8. Mention the goals of design process in embedded computing systems.
9. Determine the requirements of block motion estimator.
10. What are data compressors ?

PART – B

(5×16=80 Marks)

11. a) Explain model train controller with the frame format of DCC.

(OR)

- b) Describe the different factors involved in embedded system design process.

28/02/18
AN



12. a) i) Describe about the basic types of memory components that are commonly used in embedded systems. (8)
- ii) Explain models of the program with no conditionals. (8)
- (OR)
- b) Outline the role of assemblers and linkers in the compilation process.
13. a) i) Elucidate on scheduling policies with suitable examples. (8)
- ii) Summarize the services of operating system in handling multiple tasks and multiple processes. (8)
- (OR)
- b) With neat sketch, explain the interprocess communication mechanism.
14. a) Observe in detail about Quality Assurance Process using the following :
- i) Quality Assurance Techniques. (8)
- ii) Verifying the specifications. (8)
- (OR)
- b) Discuss about the distributed embedded architecture.
15. a) i) Demonstrate in detail about design example of audio player. (8)
- ii) Summarize the principle and operation of software MODEM. (8)
- (OR)
- b) Demonstrate the sequence diagram of taking picture with digital still camera.