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GIET MAIN CAMPUS AUTONOMOUS GUNUPUR – 765022

B. Tech Degree Examinations, December – 2020

(Seventh Semester)

BECPE7031 / BEIPE 7031 – EMBEDDED SYSTEMS

(AE & IE and ECE)

Time: 2 hrs

Maximum: 50 Marks

The figures in the right hand margin indicate marks.

PART – A: (Multiple Choice Questions)

(1 x 10 = 10 Marks)

Q.1. Answer ALL questions

[CO#] [PO#]

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|--|--|-----|-----|
| a. Embedded systems are?
(i) Electronic
(ii) Electro- mechanic
(iii) Function Specific
(iv) All | | CO1 | PO1 |
| b. An Embedded System?
(i) Contain GPOS
(ii) May or may not contain OS
(iii)Combination of GPOS &
hardware
(iv) None | | CO1 | PO2 |
| c. AGC developed by MIT Instrumentation lab for the guidance of?
(i) Command Module
(ii) Lunar Excursion Module
(iii) Both (ii) &(i)
(iv) None | | CO1 | PO1 |
| d. ABS stands for?
(i) A lock Breaking Standard
(ii) Antilock Breaking System
(iii) Anti Bounce System
(iv) Average Breaking System | | CO2 | PO1 |
| e. Which of the following is a distributed system
(i) ATM
(ii) AVM
(iii) SCADA
(iv) All | | CO2 | PO2 |
| f. % susceptibility of system to failure is measured by
(i) MBTF & MTRT
(ii) MTFB & MRTT
(iii) MTBF & MTTR
(iv) All | | CO2 | PO1 |
| g. The task management in the kernel was done by?
(i) Primary Memory management
(ii) File system management
(iii) Process management
(iv) All | | CO3 | PO1 |
| h. Secondary storage management will do?
(i) Disc storage allocation
(ii) Free Disc space management
(iii) Disc scheduling
(iv) All | | CO3 | PO2 |
| i. Which of the following is a non volatile one?
(i) SRAM
(ii) DRAM
(iii) ROM
(iv) None | | CO4 | PO1 |
| j. MOV A, #30H, transfers ----- decimal value to Accumulator of 8051?
(i) 30
(ii) 28
(iii) 60
(iv) 48 | | CO4 | PO2 |

PART – B: (Short Answer Questions)

(2 x 5 = 10 Marks)

Q.2. Answer ALL questions

	[CO#]	[PO#]
a. The core of an Embedded system falls into how many categories and name them?	CO1	PO1
b. In non-operational quality attributes, narrate about portability?	CO2	PO2
c. Briefly entitle the characteristics of an Embedded system?	CO2	PO1
d. Define key usage of kernel?	CO3	PO2
e. Name all possible languages that support Embedded firmware?	CO4	PO2

PART – C: (Long Answer Questions)

(6 x 5 = 30 Marks)

Answer ANY FIVE questions

	Marks	[CO#]	[PO#]
3. Demonstrate the purposes of Embedded systems?	(6)	CO1	PO1
4. Briefly explain the usage of processors and controllers in Embedded systems?	(6)	CO1	PO3
5. List the fundamental issues in hardware software co-design?	(6)	CO2	PO1
6. Demonstrate about FSM with one example?	(6)	CO2	PO3
7. Explain the role of monolithic kernel and microkernel in building of an OS?	(6)	CO3	PO1
8. Brief out source file to object file conversion with suitable sketch?	(6)	CO3	PO3
9. What are the drawbacks of Assembly language usage in firmware development?	(6)	CO4	PO1
10. Choose one domain specific application of an Embedded system and explain its working?	(6)	CO4	PO3

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