

**B.ELECTRICAL ENGINEERING (EVENING) EXAMINATION, 2017**  
(5<sup>TH</sup> Year, Second Semester)

**SUBJECT: -REAL TIME SYSTEMS (Special Paper-II)**

Time: Three hours

Full Marks :100  
(50 marks for each part)

Use a separate Answer-Script for each Part

No. of Questions	PART I	Marks
	<p><i>Answer any three Questions</i> <i>Two marks reserved for neatness and well oraganized answers.</i></p>	
1.(a)	What is interrupt handling? How single interrupt system is different from multiple interrupt system? Explain.	10
(b)	Draw and explain the schematic block diagram of a real time system.	6
2. (a)	Define different task classes.	5
(b)	Discuss About Von Neumann Architecture and Harvard Architecture.	6
(c)	What is deadline? Define time value function.	5
3.(a)	Classify RTS based on deadline.	6
(b)	Explain elaborately the functional requirement of an aircraft monitoring system.	10
4.(a)	State the different types of addressing mode and explain elaborately any there.	6
(b)	Discuss about fetch and execute cycle.	10
5.	Write short notes on any two: (a) Watch dog Timer (b) Von Neumann bottleneck. (c) Semaphores and Mailboxes.	16

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Bachelor of Electrical Engineering (Evening), 5<sup>th</sup> Year 2<sup>nd</sup> Semester Exam, 2017

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Question No.	PART - II	Marks
	<b>Answer any three. Question No. 2 carries the maximum marks.</b>	
1. i)	What is the criterion of a system to be called a real time system?	3+5+5+3
ii)	What is Life cycle of software? Why it is needed?	
iii)	What are the characteristics of Real Time system software?	
iv)	RTSS generally needs parallelism. – Justify	
2. i)	What is SRS document?	4+5+4+5
ii)	What are the merits and demerits of Waterfall Life cycle Model?	
iii)	What are the origins risks may occur during software development process?	
iv)	How risk is taken care of in Spiral Model?	
3.	Write short notes on	16
i)	Explain Environmental model	
ii)	Behavioral model	
iii)	essential model	
iv)	PEM.	
v)	SEM.	

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Question No.	PART - II	Marks
4. i)	What are the objectives of structural analysis?	4 +8+ 4
ii)	Draw and explain the analysis model in brief.	
iii)	What is the difference between CSPEC and PSPEC?	
5. i)	Draw the relationship between Structural analysis and Design.	5 + 5 + 6
ii)	What are the criteria of a good structural design?	
iii)	What is Cohesion? Explain different types of cohesion.	