



S J P N Trust's
Hirasugar Institute of Technology, Nidasoshi.

Inculcating Values, Promoting Prosperity
Approved by AICTE, Recognized by Govt. of Karnataka and Affiliated to VTU Belagavi.
Recognized Under Section 2(f) of UGC Act, 1956.
Accredited at 'A' Grade by NAAC, Programmes Accredited by NBA: CSE, ECE, EEE & ME.

IQAC

File I-11

2020-21 (Odd)

Rev: 01

CALENDAR OF EVENTS FOR THE ACADEMIC YEAR 2020-21 (Odd)

Date	Events	
01-09-2020	Commencement of III/V/VII Semester Classes	September-2020
05-09-2020	Teacher's Day	S M T W T F S 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
15-09-2020	Engineer's Day	17- Mahalaya Amavasve
02-10-2020	Gandhi Jayanthi	October-2020
05-10-2020 to 07-10-2020	First Internal Assessment for III/V Semester	S M T W T F S 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
08-10-2020	Feedback-I on Teaching-Learning	2-Gandhi Jayanthi
10-10-2020	Display of 1 st Internal Assessment Marks of III/V Sem and Submission of Feedback-I to office.	25-Ayudha Pooja
10-10-2020	Indoor games/ Health Checkup Camp	26-Vijayadashami
17-10-2020	Blood Donation Camp	30-Eid Milad
19-10-2020 to 21-10-2020	First Internal Assessment for VII Semester	31-Valmiki Jayanthi
24-10-2020	Display of 1 st Internal Assessment Marks of VII Sem	
27-10-2020	EDP Activities	November-2020
01-11-2020	Kannada Rajyotsava	S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
21-11-2020	HSIT Quest-2020	14- Narak Chaturdashi,
23-11-2020 to 25-11-2020	Second Internal Assessment for III/V/VII Semester	16-Balipadyami, Deepawali
26-11-2020	Feedback-II on Teaching-Learning	December-2020
28-11-2020	Display of 2 nd Internal Assessment Marks and Submission of Feedback-II to office.	S M T W T F S 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
28-12-2020 to 30-12-2020	Third Internal Assessment for III/V/VII Semester	3-Kanakadas Jayanthi, 25-Christmas
09-01-2021	Display of final Internal Assessment Marks	January-2021
11-01-2021 to 13-01-2021	Lab Internal Assessment of III/V/VII Semester	S M T W T F S 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
16-01-2021	Last Working Day of III/V/VII Semester	26-Republic Day
21-01-2021 onwards	Practical Examination of III/V/VII Semester	
08-02-2021 to 27-03-2021	Theory Examination of III/V/VII Semester	
29-03-2020 to 10-04-2020	Internship for VII Semester	

Dr. B. V. Madiggond
IQAC Co-ordinator

Dr. S. C. Kamate
Principal



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Examination
Academic
3rd IA Test
AY:2020-21 (ODD SEM)

3rd IA Test TIME-TABLE

Class: 3rd, 5th and 7th Semesters

Date→ Time→ Semester↓	28-12-2020		29-12-2020		30-12-2020	
	11AM - 12 NOON	3PM - 4PM	11AM -12 NOON	3PM - 4PM	11AM - 12 NOON	3PM - 4PM
BE-III	18**31	18**32	18**33	18**34	18**35/18ME35B	18**36/18ME36B
BE-V	18**51/17**51/15**51	18**52/17**52/15**52	18**53/17**53/15**53	18**54/17**54/15**54	18**55/17**55X/15**55X	18**56X/17**56X/15**56X
BE-VII	17**71/15**71	17**72/15**72	17**73/15**73	17**74X/15**74X	17**75X/15**75X	
18CPH39 (Constitution of India, Professional Ethics and Cyber Law): 30-12-2020:4:30pm to 5:30pm for III sem ME and EEE 18KVK39/18KAK39(Vyavarika Kannada/Aadalitha Kannada: 30-12-2020:4:30pm to 5:30pm for III sem CSE and ECE 18CIV59 :Environmental Studies : 30-12-2020 :4:30pm to 5:30pm for all Branches						

Instructions:

1	Subject teacher will release IA question paper at 10:50 am (Morning Session) and at 2:50pm (Afternoon Session) in the students' respective WhatsApp group.
2	Student shall write the test on available white pages only
3	Student shall write the following information on the top of the first page: IA Test-I, Name:, USN:, Roll No., Subject:, Subject Code:, Date:, Time:, Total No. of Pages written (after completion of the test)
4	Student shall write page number on each page and signature at the end of the each page
5	Student shall submit completed answer script in single PDF to the subject teacher's personal WhatsApp No./E-mail before 12:10pm (Morning Session) and 4:10pm (Afternoon Session)

Note: All are informed to strictly adhere to the above instructions and kindly cooperate to complete the IA in view of COVID-19 pandemic situation.

Dr. S. N. Topannavar
 Examination Coordinator



Dr. S. C. Kamate
 Principal



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ECE Dept.

Exam.

Internal Assessment

Odd Sem (2020-21)

THIRD INTERNAL ASSESSMENT

Sem: VII

Date: 30.12.2020

Sub: Real Time Systems

Time: 03PM to 4PM

Sub. Code: 17EC743

Max. Marks: 30

Note: Answer two full questions, draw sketches wherever necessary.

Q. No	Description of Question	Marks	CO	RBT LEVEL
1	a Explain with neat diagram structures of RTOS.	7	CO404.5	L2
	b Explain Cyclic and Preemptive scheduling strategies.	8	CO404.5	L2
OR				
2	a Draw and Explain task state diagram.	7	CO404.5	L3
	b Explain the general structures of Input Output Sub System(IOSS).	8	CO404.5	L2
3	a With neat flow-chart describe single program approach with reference to RTS design.	7	CO404.4	L3
	b Explain Fore ground and Back ground system, with flow chart.	8	CO404.4	L2
OR				
4	a Explain the outline of abstract modeling approach of Ward and Mellor.	7	CO404.4	L2
	b Write a short note on Yourdon methodology.	8	CO404.4	L3

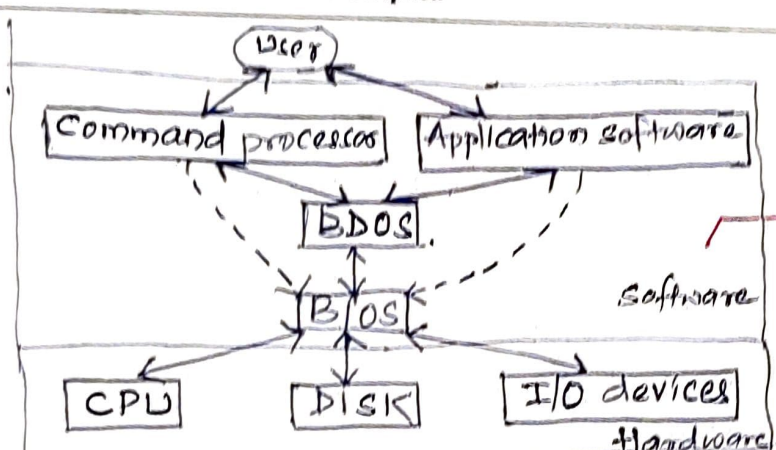
Course Coordinator

Module Coordinator

HOD



3 IA - SCHEME OF EVALUATION

Sem :	7	Subject : Real Time Systems	Sub Code : 17EC743	Date : 20.12.2020		
Q. No.	Blk	Description	Marks	CO's	RBT Level	
①	a)	 fig. a. General structure of a simple OS. In addition to supporting and controlling the basic activities, operating systems provide various utility programs, for example loaders, linkers, assemblers and debuggers, as well as run-time support for high level languages. Application programs will normally communicate with the hardware of the system through system calls which are processed by the BIOS. BIOS connects the logical device to the physical device. The actual operation of the physical device is performed by software in the BIOS.	7	4.04.5	L2	(4)
	b)	Scheduling strategies: • Cyclic • Pre-emptive. Cyclic: The first of these, cyclic, allocates the CPU to a task in turn. The task uses the CPU for as long as it wishes. It is an very simple strategy. which is highly	8	4.04.5	L2	(4)

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**3 IA - SCHEME OF EVALUATION**

Sem : 7		Subject : Real Time System	Sub Code : 17EC743	Date : 30.12.2020		
Q. No.	Bit	Description	Marks	CO's	RBT Level	
		efficient in that it minimized the time lost in switching between tasks. It is an efficient and effective strategy for small embedded systems for which the execution times for each task run are carefully calculated and for which the software is carefully divided into appropriate task segments. • <u>Pre-emptive</u> : There are many pre-emptive strategies. All involve the possibility that a task will be interrupted - hence the term pre-emptive before it has completed a particular invocation. The simplest form of pre-emptive scheduling is to use a time slicing approach. The majority of existing RTOS use a priority scheduling mechanism. Tasks are allocated a priority level and at the end of a predetermined time slice the task with the highest priority of those ready to run is chosen and is given control of the CPU.				
②	a)	<u>Task management</u> The basic functions of the task management module or executive are: • To keep a record of the state of each task. • To schedule an allocation of CPU time to each task, and • To perform the context switch, that is to save the status of the task.	7	404.5	L2	

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3 IA - SCHEME OF EVALUATION

Sem : 7	Subject : Real Time System	Sub Code : 17EC743	Date : 30.12.2020
Q. No.	Bit	Description	Marks
		that is being allocated CPU time Active - has control of CPU Ready - resources required is CPU Suspended - resources not available.	4
b)		<u>General structure IOSS :</u>	8
		One of the most difficult areas of programming is the transfer of information to and from external devices. The availability of a well designed and implemented IOSS in an OS	4
			404.5 L2

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ECE L

Exam.

Scheme of Evaluation

2020-21 (Odd Sem)

Page No. 4/6

3 IA - SCHEME OF EVALUATION

Sem : 7		Subject : RTS	Sub Code : 17EC743	Date : 30.12.2020		
Q. No.	Bit	Description	Marks	CO's	RBT Level	
		is essential for efficient programming. The IOSS handles all the details of the devices. In a multitasking system the IOSS should also deal with all the problems of several tasks attempting to access the same device.				
3	a)	Single program approach: <pre> graph TD Start([Start]) --> StartLP[Start LP] StartLP --> ReadClock[Read clock input line] ReadClock --> Elapsed{20ms Elapsed?} Elapsed -- F --> ReadClock Elapsed -- T --> UpdateClock[Update clock & calendar] UpdateClock --> TimeToControl{Time to control?} TimeToControl -- T --> Control[Control] Control --> TimeToDisplay{Time to display} TimeToControl -- F --> TimeToDisplay TimeToDisplay -- T --> DisplayUpdate[Display Update] DisplayUpdate --> OperatorIOP{Operator I/P} TimeToDisplay -- F --> OperatorIOP OperatorIOP -- T --> ManagementOIP[Management O/P] OperatorIOP -- F --> ManagementRequest{Management request} ManagementRequest -- T --> ManagementOIP ManagementRequest -- F --> Elapsed Control --> Elapsed DisplayUpdate --> Elapsed OperatorIOP --> Elapsed ManagementOIP --> Elapsed </pre>	7	4044	L3	

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3 IA - SCHEME OF EVALUATION

Sem :	7	Subject :	RTS	Sub Code :	17EC743	Date :	30.12.2020
Q. No.	Bit	Description	Marks	CO's	RBT Level		
		Using the standard programming approach the modules shown in figure are treated as procedures or subroutines of a single main program. b) Foreground Fig: software module for foreground/ Background system. The module with hard time constraints are run in the so-called "foreground" and modules with soft constraints are run in the "background". The foreground modules, or "tasks" as they are usually termed, have a higher than the background tasks and foreground tasks must be able to interrupt background task.	3 8 4 4	404.4	L2		
4	9	The outline of Ward and Mellor Method, is shown in figure. The starting point is to build from the analysis of the requirements a s/w model representing the requirements in terms of the abstract entities. This model is called the essential model. It is in two parts: an environmental model which describes the relationship of the system being modeled with its environment	7 4	404.4	L2		

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3 IA - SCHEME OF EVALUATION

Sem : 7	Subject : RTS	Sub Code : 17EC743	Date : 30.12.2020		
Q. No.	Bit	Description	Marks	CO's	RBT Level
		Abstract Model. Environmental Model Description of Environment Context Diagram Event List Behavioral Model Description of behavioral response to Environment Transformation schema Data schema	3		
b)		Yocardon Methodology: The Yocardon Methodology has been developed over many years. It is a structured methodology based on using data flow modeling techniques and functional decomposition. It supports development from the initial analysis stage through to implementation. Both Ward & Mellor and Hartley & Shrobe have introduced extensions to support the use of Yocardon approach. Requirement ↓ Design ↓ Realisation User's Concepts → Specification Specification → Enhanced Abstract Model Enhanced Abstract Model → Implementation Model Implementation Model → Real System Technology Specific (points to Specification) Design guideline (points to Implementation Model) Technology (points to Real System)	8	4044	L3

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ECE Dept.
Internal Assessment
Evaluation Sheet
2020-21 (Odd Sem)

Internal Assessment – III

Semester : 7
 Course : Real Time System
 Course Coordinator : Prof. Sachin S Patil

Course Code: 17 EC 743
 Date:

Roll. No.	USN	Bitwise Marks																Grand Total
		Q. No. 1				Q. No. 2				Q. No. 3				Q. No. 4				
		a	b	c	Total	a	b	c	Total	a	b	c	Total	a	b	c	Total	
1	2HN17EC001					7	8							7	8			30
2	2HN17EC002					7	8							7	8			30
3	2HN17EC003					7	8							7	8			30
4	2HN17EC004					7	8							7	8			30
5	2HN17EC005	7	8			7	8							7	8			30
6	2HN17EC006	7	8											7	8			30
7	2HN17EC007					7	8							7	8			30
8	2HN17EC008					7	8							7	8			30
9	2HN17EC009	7	8											7	8			30
10	2HN17EC010					7	8							7	8			30
11	2HN17EC011					7	8							7	8			30
12	2HN17EC012					7	8							7	8			30
13	2HN17EC013	7	8											7	8			30
14	2HN17EC014					7	8							7	8			30
15	2HN17EC015					7	8			7	8							30
16	2HN17EC016					7	8							7	8			30
17	2HN17EC017					7	8							7	8			30
18	2HN17EC019					7	8							7	8			30
19	2HN17EC020					7	8							7	8			30
20	2HN17EC021					7	8							7	8			30
21	2HN17EC022	7	8											7	8			30
22	2HN17EC023					7	8							7	8			30



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Internal Assessment

Evaluation Sheet

2020-21 (Odd Sem)

Roll. No.	USN	Bitwise Marks																Grand Total	
		Q. No. 1				Q. No. 2				Q. No. 3				Q. No. 4					
		a	b	c	Total	a	b	c	Total	a	b	c	Total	a	b	c	Total		
23	2HN17EC024					7	8								7	8			30
24	2HN17EC025	7	8			7	8			7	8				-				30
25	2HN17EC026					7	8								7	8			30
26	2HN17EC027					7	8								7	8			30
27	2HN17EC028					7	8			7	8								30
28	2HN17EC029	7	8												7	8			30
29	2HN17EC030	7	8							7	8								30
30	2HN17EC031	7	8							7	8								30
31	2HN17EC032					7	8								7	8			30
32	2HN17EC033					7	8								7	8			30
33	2HN17EC035	7	8												7	8			30
34	2HN17EC037					7	8								7	8			30
35	2HN16EC029														7	8			30
																			AB


Course Coordinator Sign

HOD