



Regulation R18

Subject code: 206DA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VI Semester Supplementary Examinations, February 2024 FUNDAMENTALS OF INFORMATION TECHNOLOGY (Electronics and Communication Engineering)

Maximum Marks: 70

Date: 24.02.2024

Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10X2M=20 Marks)

		CO	Bloom Tx
1	Define super computer.		
2	Explain assembler.	CO1	L1
3	What are the functions of operating system?	CO1	L2
4	What is the use of Job Queues, Ready Queues & Device Queues?	CO2	L1
5	Name five Models used in SDLC	CO2	L1
6	List out any five system specific GUI elements.	CO3	L1
7	What is Augmentation Rule? Give example.	CO3	L2
8	What is OLAP?	CO4	L1
9	What is polymorphism? List out its types.	CO4	L1
10	What is Rational Rose?	CO5	L1
		CO5	L1

Part-B

Answer All the following questions.

(10MX 5=50Marks)

11	A. What are the languages used in computer generations. (5M) B. What are the phases involved in execution of instruction and explain. (5M)	CO1	L2
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OR

12	A. Differentiate between static RAM and Dynamic RAM (5M) B. What are the functions in the input unit explain with example. (5M)	CO1	L4
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13	Consider the following set of processes with the length of the CPU burst time given in milliseconds	CO2	L4
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Process	BurstTime	Priority
P1	10	3
P2	1	1
P3	2	3
P4	1	4
P5	5	2

The processes are assumed to have arrived in the order p1, p2, p3, p4, p5 all at time 0.

- A. Draw four Gantt charts illustrating the execution of these processes using FCFS, SJF, anon pre-emptive priority (a smaller priority number implies a

	<p>higher priority) and RR (quantum=1) scheduling.</p> <p>B. What is the turnaround time of each process for each of the scheduling algorithms in part?</p> <p>C. What is the waiting time of each process for each of the scheduling algorithms in part?</p> <p>D. Which of the schedules in part a results in the minimal average waiting time? (10M)</p>		
	OR		
14	Explain the development process of an algorithm steps. [10M]	CO2	L5
15	Explain the phases of Spiral Model with neat diagram. [10M]	CO3	L5
	OR		
16	Describe different tools used for GUI Implementation. [10M]	CO3	L2
17	<p>Consider the relational schema R = (ABCD) and the set of functional dependencies</p> <p>$F = \{AB \rightarrow C, B \rightarrow D, C \rightarrow A\}$. [10M]</p> <p>a) Is R in 1NF?</p> <p>b) Is R in 2NF?</p> <p>c) Is R in 3NF?</p> <p>d) Is R in BCNF?</p>	CO4	L4
	OR		
18	<p>A. Name few examples of OLTP Transactions. [5M]</p> <p>B. What are the Characteristics of OLTP? [5M]</p>	CO4	L2
19	Explain different types of relationships used in UML. [10M]	CO5	L5
	OR		
20	Develop Sequence and Collaboration diagrams with example. [10M]	CO5	L3