

**M. TECH.-II (INFORMATION TECHNOLOGY) (CBCS – 2015  
COURSE) : SUMMER - 2018  
SUBJECT: REAL TIME SYSTEMS**

Day: **Friday**  
Date: **15/06/2018**

**S-2018-3008**

Time: **11.00 AM TO 02.00 PM**  
Max Marks: 60

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written **SEPARATE** answer book.
- 4) Assume suitable data, if necessary.

**SECTION-I**

**Q1** Define a real time system. Classify tasks with reference to real time system. **(10)**

**OR**

What are cost functions and hard deadlines? Which factors affect the estimation of execution time for any given program?

**Q.2** What is an IRIS task? Explain any one algorithm for uniprocessor scheduling of an IRIS task. **(10)**

**OR**

State and explain a static priority preemptive scheme to be used for an uniprocessor.

**Q.3** Which algorithms are used for scheduling and assignment of non preemptive tasks? Explain any one in detail **(10)**

**OR**

State and explain the Bin packing algorithm for EDF.

**SECTION-II**

**Q.4** State the role of compiler and linker for the real time program execution. **(10)**

**OR**

What are the application of Flex and Euclid languages and how do they provide run time support.

**Q.5** How main memory databases play an important role in real time database? Explain in detail. **(10)**

**OR**

Compare main memory Vs general purpose databases along with its application.

**Q.6** Define medium access control protocol. List the different types of medium access control protocols and explain any one. **(10)**

**OR**

How does communication takes place in multicomputer system? Draw a structure with real time example.

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