

**B.TECH SEM – V (2007 COURSE) (INF. TECH.) : WINTER - 2017**

**SUBJECT: SYSTEM SOFTWARE & OPERATING SYSTEMS**

Day: **Saturday**  
Date: **13/01/2018**

Time: **02.30 PM TO 05.30 PM**  
Max. Marks: **80**

**W-2017-2470**

**N.B.:**

- 1) **Q. No. 1 and Q. No. 5** are **COMPULSORY**. Out of the remaining attempt any **TWO** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answer to both the sections should be written in **SEPARATE** answer books.
- 4) Draw neat diagrams **WHEREVER** necessary.

**SECTION-I**

- Q.1**
- a) Enlist and describe components of system software. **(05)**
  - b) Describe the concept of cross compiler. **(05)**
  - c) Describe general loader scheme with an example. **(04)**
- Q.2**
- a) Explain evolution of system software. **(07)**
  - b) Describe design of two pass macroprocessor. **(06)**
- Q.3**
- a) Describe compiler phases with an example. **(07)**
  - b) Describe parameters passing using call by reference value and name with an example. **(06)**
- Q.4**
- a) Describe software tools for program testing. **(07)**
  - b) Describe design of absolute loader. **(06)**

**SECTION-II**

- Q.5**
- a) Explain simple batch system with an example. **(05)**
  - b) Describe process definition control with an example. **(05)**
  - c) Describe contiguous allocation with an example. **(04)**
- Q.6**
- a) Write a short note on real time systems. **(07)**
  - b) Enlist and describe system calls with an example. **(06)**
- Q.7**
- a) Explain Banker's algorithm with an example. **(07)**
  - b) Explain process state diagram with an example. **(06)**
- Q.8**
- a) Explain paging segmentation with an example. **(07)**
  - b) Describe FIFO page replacement algorithm with an example. **(06)**

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