PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2017
(Sixth Semester)

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Branch- **ELECTRONICS**

REAL TIME OPERATING SYSTEM

Time : Three Hours   Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks   (1 0 x 2 = 20)

1 • Define Process.
2   Define RTOS.
3   What is task and task state?
4   What is semaphore?
5   Give the steps to' destroy a message queue.
6   Write down the needs for memory management.
7 [1] How can the memory power saved?
8 • Define pipelining.
9   What is locating?
10   What is tool chain?

SECTION - B (25 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

11 a Give an introduction about software architecture.   ,   -
                                  OR   '
    b Write short notes on function scheduling.

12 a Write a note on task and data.
                                  OR
    b What is semaphore? Differentiate binary semaphore and counting
        semaphore..

13 a Write note on message queues.   "
                                  OR.
    b Explain memory management in embedded system.

14 a   Explain the principles of RTOS design.
                                  OR
    b Write a note on saving memory space.   .

15 a Explain cross assemblers.
                                  OR   '
    b Explain state transition diagram of RTOS.

SECTION - C (30 Marks)
Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3 x 1 0 = 30)

16   Explain in detail about RTOS architecture.

17   Explain multiple tasks and their functions.

18   Explain in detail about queue related functions.

19   Explain in detail about memory management functions.

20   Explain in detail about embedded software linker.

■T **Z-Z-Z**   END