PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2017
(First Semester)

Branch COMPUTER TECHNOLOGY

DIGITAL ELECTRONICS

Time : Three Hours Maximum ; 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** marks (10x2. = 20)

1 Convert the binary number (1010.011)2 to decimal number system.
2 What is the main advantage of 8421 code?
3 Name the basic gates.
4 Give the truth table of NOR gate.
5 Symbolof sum term.
6 What isk map?
7 What isa full adder?
8 Define a decoder.
9 How can a JK FF converted to a TFF?
10 What is the other name for asynchronous counter?

SECTION - B (25 Marks)

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

11 a Working operation of Binary multiplication of given numbers **(11.110)2 by (100.1)2.**

OR

b Write short notes on Binary codes.

12 a With the truth tables and graphical symbols explain the universal gates.

OR

b WTrite a short notes on integrated circuits.

13 a Simplify Y = AB ABC + A B + A B C using canonical method.

OR

b State and prove Demorgan's theorem.

14 a Write short notes on half subtractor.

OR

b Write short notes on Demultiplexer.

15 a Explain the working of a D-Flipflop.

OR

b Write short note on clocks.

SECTION - C (30 Marks)

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

16 Briefly explain about error detecting and error correcting codes.

17 Discuss the various applications Of XOR gate.

18 Simplify the Boolean function using K-Map
f(A, B, C, D) = X (0, 1, 2, 4, 5, 6, 8, 9, 12, 13, 14)

19 Explain about 8 to 1 line multiplexer with logic diagram, logic circuit and truth table.

20 Write in detail about clocked RS flip flop and clocked JK flip flop.