PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2018
(Third Semester)

Branch - MATHEMATICS WITH COMPUTER APPLICATIONS

DIGITAL ELECTRONICS

Time : Three Hours   Maximum : 75 Marks

SECTION-A (20 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (10 x 2 = 20)

1   Write the digital signals.
2   Define frequency.
3   Draw the OR gate with truth table.
4   Write the commutative law.
5   Draw the truth table of binary subtraction.
6   Draw the diagram of half adder.
7   What is meant by flip flop?
8   Write short note on ring counter.
9   What are types of D/A converter?
10   Define Accuracy of A/D converters.

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

11 a Write short notes on ASCII codes with example.
OR
b Convert $(34.562)_8 = (\ )_2$.

12 a   Explain the operation of AND gate with pin diagram.
OR
b Discuss about the duality theorem.

13 a Describe the full subtractor with neat diagram.
OR
b With neat diagram, explain the demultiplexer.

14 a Explain about JK flip flop with necessary diagram.
OR
b What is meant by shift register? Explain the serial in serial out shift register.

15 a Write the resolution of D/A convertor.
OR
b Define A/D convertor and explain the simultaneous conversion method.

SECTION - C (30 Marks)
Answer any THREE Questions
ALL Questions Carry EQUAL Marks (3 x 10 = 30)

16   Write the following (i) GRAY Code (ii) Parity Code.

17   Explain the Demorgan's theorem.

18   Explain the decoder with neat diagram.

19   With neat diagram, explain the synchronous counter.