PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2018
(First Semester)

Branch- **ELECTRONICS**

CIRCUIT ANALYSIS

Time ; Three Hours Maximum 75 Marks

SECTION-A (20 Marks!

Answer **ALL** questions

ALL questions earn- EQUAL marks (10 x 2 = 20)

1 Explain the common colorcode for resistance,
2 Classify the resistors.
3 State Kirchoffs voltage law.
4 State Norton's theorem.
5 Give the relation between mean and peak value of an AC.
6 What is the time constant for RC circuit?
7 Define average power.
8 What is parallel Resonance?
9 What is transient response?
10 What are the advantages of three phase system?

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carr}' EQUAL Marks (5 x 5 = 25)

11 a Explain the series and parallel combination of resistors.

OR

b Explain about Star to Delta transformations.

12 a State and explain superposition theorem.

OR

b State and prove Thevcnin's theorem.

13 a Explain about series RL circuit.

OR

b With suitable diagram explain pure capacitive circuit.

14 a State the concept of band width of a series RLC circuit,

OR

b Explain with a neat diagram for a series resonance.

15 a Explain about generation of three phase voltages.

OR

b Explain with neat diagram power measurement in a Single phase circuit by Wattmeter.

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x **10** = **30)**

16 Illustrate the resistors color coding and give its value.

17 State and explain Superposition theorem.

18 With neat sketches explain RC series circuit.

19 Explain that how to derive Q factor of parallel resonance.

20 Explain the three Wattmeter method of measuring power in 3-phase circuits with neat sketch.

7.7.7 **END**