PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2022
(First Semester)

Branch – ELECTRONICS

CIRCUIT ANALYSIS

Time: Three Hours   Maximum: 75 Marks

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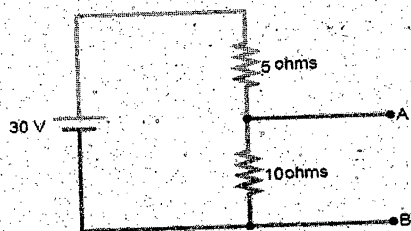ALL questions carry **EQUAL** marks   (10 x 2 = 20)

1   Define Voltage

2   State the SI unit for Inductance and capacitance

3   Define Node

4   State Kirch off's II Law

5   What is Resonance ?

6   List the components of Resonance Circuit.

7   Draw the Purely resistive circuit

8   Define True Power.

9   Mention the use of Wattmeter.

10   Define Cycle.

SECTION - B (25 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks   (5 x 5 = 25)
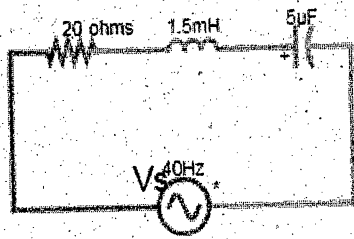
11 a   Discuss about the Power and Energy.
                    OR
   b   Calculate the Voltage across the 10 Ω resistor

12 a   Explain the process of Mesh Analysis
                    OR
   b   State the Millman's thorem and give its uses in circuit analysis

13 a   Calculate the time period of 30 Hz Sine wave
                    OR
   b   Explain the Angular relation of a sine wave.

14 a   Discuss about Average Power.
                    OR
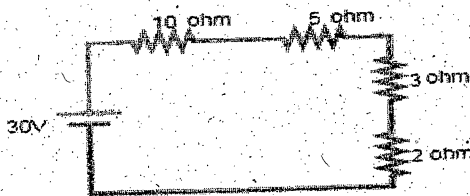
b Calculate the resonant frequency for the given circuit

15 a   Explain the operation of Poly-phase
OR
b   Discuss how the power is measured in 3 phase circuits.

SECTION -C (30 Marks)
Answer ANY THREE questions
ALL questions carry EQUAL Marks $(3 \times 10 = 30)$

16. State and derive the equation for Ohm's Law.

17. Determine the total amount of power in the given circuit.

18. Elucidate the working of RLC series circuit.

19. Explain the Q factor of Parallel resonance

20. Describe the generation and advantages of 3-phase system

Z-Z-Z   END