BENNETT UNIVERSITY
TIMES OF INDIA GROUP

POSSESSION OF MOBILE IN EXAMINATION IS A UFM PRACTICE

Name of Student ---------- Enrolment No. ----------

Department ----------

BENNETT UNIVERSITY, GREATER NOIDA

Mid Term Examination, FALL SEMESTER 2018-19

COURSE CODE: EECE105L MAX. DURATION: **ONE HOUR**

COURSE NAME: Fundamentals of Electrical and Electronics Engineering

COURSE CREDIT: 5 MAX. MARKS: **20**

Note

- Answer all questions
- Assume any missing data

Questions

1. For the circuit shown in fig. 1, draw the Thevenin's equivalent circuit and find the power consumed by the 5 Ω load resistor. **(6 Marks)**

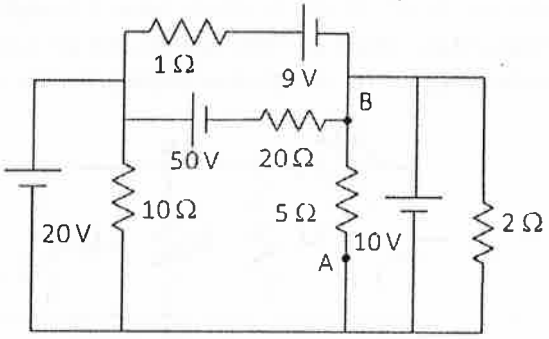

Fig. 1: Circuit for problem 1

2. Consider the circuit shown in fig. 2. Find the power delivered to 45 Ω resistor due to 20 V source and 2 A source. **(6 Marks)**

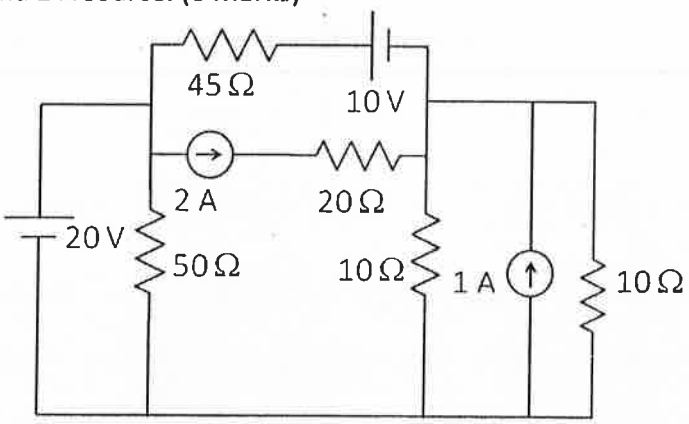

Fig. 2: Circuit for problem 2

3. For the signals described in eq. (1), which wave leads and which wave lags. Also find the angle of leading/lagging. **(2 Marks)**

$$f(t) = 10\sin(\omega t + 20^0)$$
$$g(t) = 10\cos(\omega t - 80^0) \quad (1)$$

4. For the waveform shown in circuit, find rms value. **(3 Marks)**

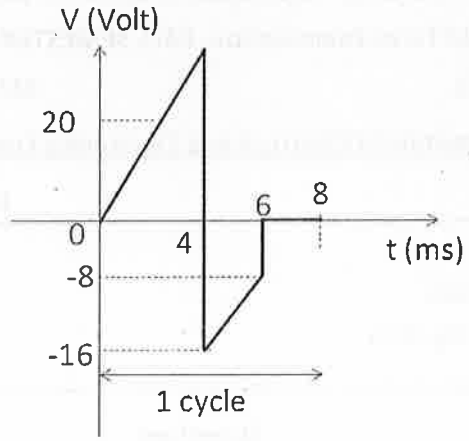

Fig. 3: Waveform for problem 4

5. Consider the circuit shown in fig. 4. Apply source transformation on the circuit to convert the circuit into a single current source and an equivalent resistance. What is the value of load resistance for which maximum power is transformed? **(3 Marks)**

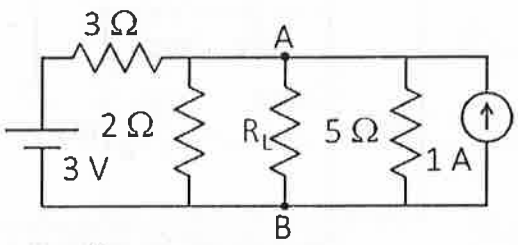

Fig. 4: Circuit for problem 5

---------- End of Questions ----------