BENNETT UNIVERSITY
TIMES OF INDIA GROUP

DO NOT WRITE ANYTHING ON QUESTION PAPER EXCEPT YOUR NAME, DEPARTMENT AND ENROLMENT No.

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

Department / School ----------

BENNETT UNIVERSITY, GREATER NOIDA

End Term Examination, Fall SEMESTER 2019-20

COURSE CODE: EECE105L MAX. DURATION: **2 Hours**

COURSE NAME: Fundamentals of Electrical and Electronics Engg. MAX. MARKS: **40**

Note : Attempt all the questions. Each question carries 5 marks.

Q.1 Find out peak to peak value, average value and RMS value over one period of the waveform shown in Fig. 1. [1+2+2]

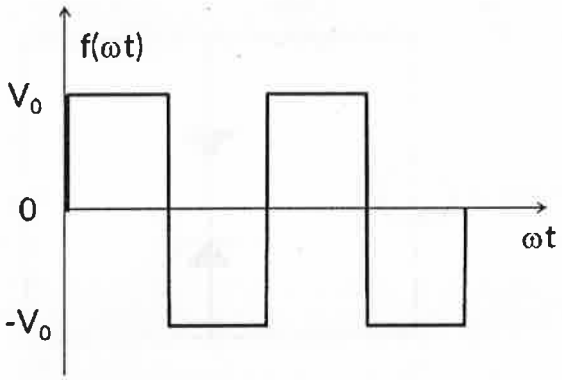

Fig. 1

Q.2 In Fig. 2, The output of the RC filter is taken between nodes C and D. Find out the transfer function and identify the filter type with proper logic. Also find out the cut-off frequency of the filter. [2+1+2]

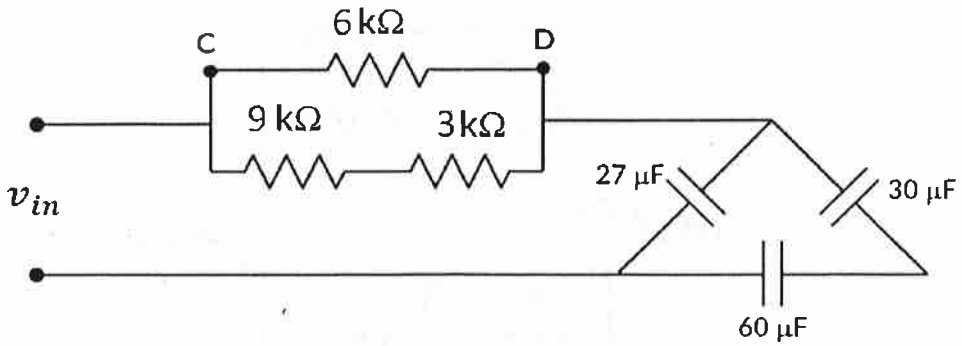

Fig. 2

Q.3 In Fig. 3, the input voltage varies from 30 V to 50 V. The diodes are made of silicon and Zener breakdown voltage is 5 V. Find out the maximum and minimum current flowing through the Zener diode.

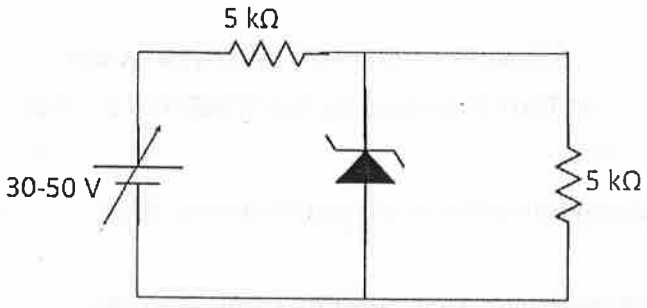

Fig. 3

Q.4 In Fig. 4, draw the equivalent circuits in positive and negative halves. Also draw the output waveform (v_{out}). The diodes are made of silicon and the Zener breakdown voltage is 5 V.

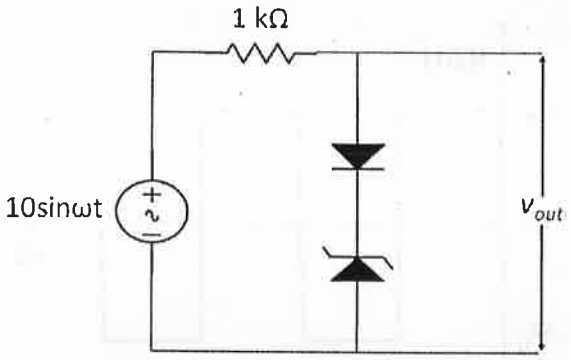

Fig. 4

Q.5 Using mesh analysis method find out the current through 30 Ω, 40 Ω and 60 Ω resistors in Fig. 5.

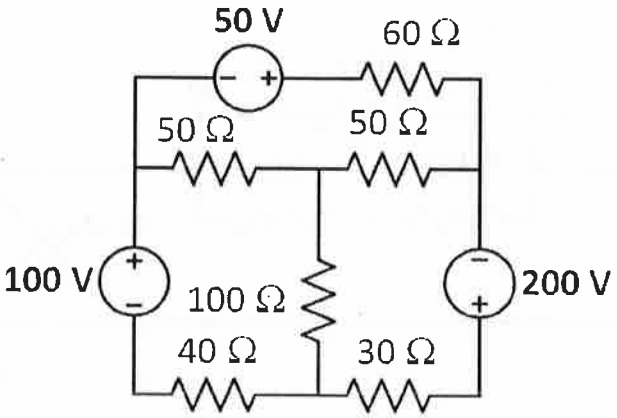

Fig. 5

Q.6 In Fig. 6, for the given input draw the output voltage across the load resistor R_L with equivalent circuits for positive and negative halves. Consider the diode is made of silicon.

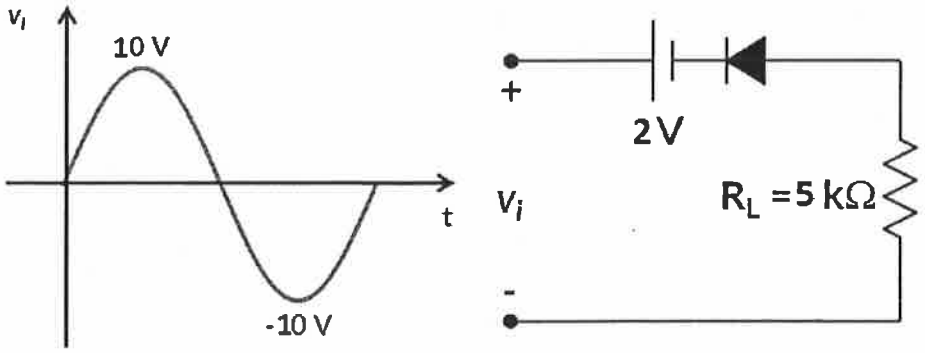

Fig. 6

Q.7 In Fig. 7, using Norton's Theorem find out the current through the load resistor 10 Ω.

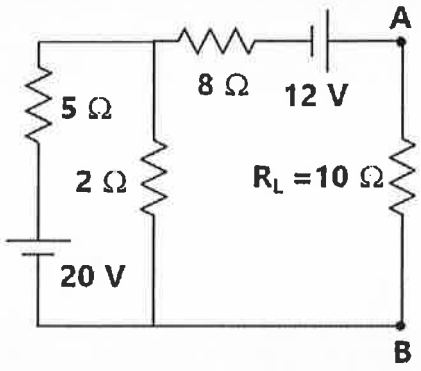

Fig. 7

Q.8 Convert $(D68C.4B6)_{16}$ into octal. Realize AND gate, OR gate and Inverter using only NOR Gates. [2+3]