

# Question Paper

Exam Date & Time: 02-Jun-2022 (09:30 AM - 12:30 PM)



**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**INTERNATIONAL CENTRE FOR APPLIED SCIENCES**  
**II SEMESTER B.Sc.(Applied Sciences) in Engg.**  
**END SEMESTER THEORY EXAMINATION- MAY/JUNE-2022**  
**Elements Of Electrical and Electronics Engg. [IEE 121]**

Marks: 50

Duration: 180 mins.

Answer all the questions.

Missing data may be suitably assumed

- 1) For the network shown in Fig.Q1A calculate the equivalent resistance between nodes A and B. (4)

A)

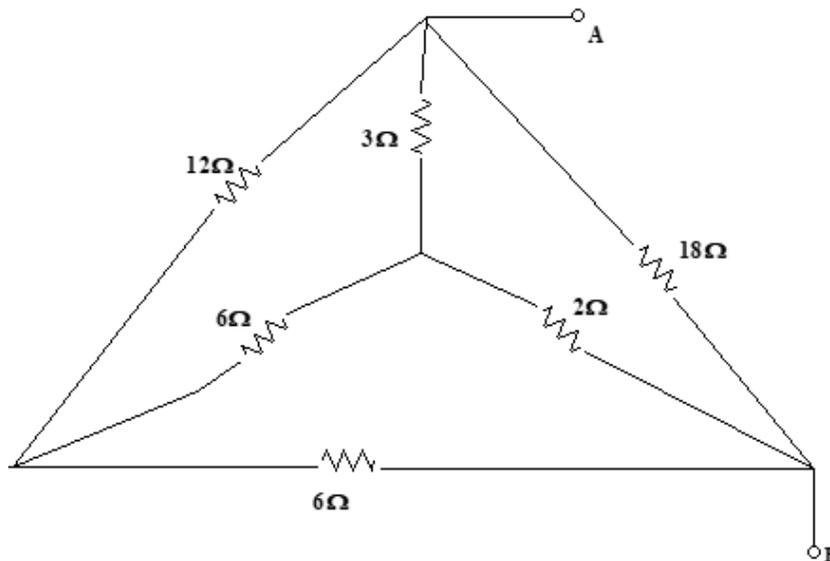


FIG.Q1A

- B) Given phasor  $A=6.34+j13.5$  and phasor  $B=20\angle-35^\circ$ . Write down the following in polar form (3)
- (a)  $A/B$
  - (b)  $(A+B)/(A-B)$
  - (c)  $(A+B)\times B/(A-B)\times A$
- C) A single phase transformer has 400 primary and 1000 secondary turns. The net cross-sectional area of the core is  $60\text{cm}^2$ . If the primary winding is connected to a 50Hz supply at 500V. Calculate (3)