Admission Test Sample Question

BRAC University
M.Sc/M.Engg in Electrical & Electronics Engineering

Semester: Year:

Name: ___________________________ ID: _______________

Seat No.: _________________________

Instructions

- Total duration for the exam is 1 hour
- There are two sections in the question
- Students have to pass each section separately
- Answer each question within the space provided in this question booklet
- No additional page will be provided

Marks Distribution

<table>
<thead>
<tr>
<th>Section</th>
<th>Marks</th>
<th>Obtain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1</td>
<td>30</td>
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<tr>
<td>Section 2</td>
<td>30</td>
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<tr>
<td>Total</td>
<td>60</td>
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- Adoption of any unfair means in the examination hall will make the candidate disqualified for admission.

- Please do not turn over the page until you are asked to do so.

Good Luck
Section 1

PART A (Total number of questions in this part is TWO (2); answer any ONE (1) question)

1. Use Node analysis to find the current $I_0$ as shown in Fig. 1.  [15]

Fig. 1
2. Find out the equivalent resistances $R_{ab}$ and $R_{cd}$ as indicted in the figure shown below using $\Delta$-$Y$ or $Y$-$\Delta$ conversion.

![Figure 2](image.png)
**PART B** (Total number of questions in this part is TWO (2); answer any ONE (1) question)

3. For the network shown in Fig. 1, find the current $I$ using **Superposition Theorem**. [15]
4. Consider the following network shown in Fig. 4.

a) Find the Thevenin’s equivalent circuit between the terminals a and b.
b) Find the load impedance for which maximum power will be transferred to the load.
Section 2

Write an English composition of 200 to 250 words on the topic given below:

“Being an extrovert is a prerequisite in order to have a successful career.” Do you agree or disagree with the given statement? Explain your views with relevant examples.