UNIVERSITI MALAYSIA PERLIS

Peperiksaan Pertengahan Semester Kedua
Sidang Akademik 2017/2018

4 April 2018

ENT101 – Test Run TeXstudio and finalxm.sty
[Ujian Menjalankan TeXstudio dan finalxm.sty]

Masa: 3 Jam

Please make sure that this question paper has **THREE (3)** printed pages including this front page before you start the examination.
*[Sila pastikan kertas soalan ini mengandungi **TIGA (3)** muka surat yang bercetak termasuk muka hadapan sebelum anda memulakan peperiksaan ini.]*

This question paper has **TWO (2)** questions. Answer **all** questions. Each question contributes 25 marks.
*[Kertas soalan ini mengandungi **DUA (2)** soalan. Jawab **semua** soalan. Setiap soalan menyumbang 25 markah.]*

Question 1
[Soalan 1]

(a) Explanation on Tables. Refer to Table 1
   [Penjelasan mengenai Jadual. Rujuk Jadual 1.]

Table 1
[Jadual 1]

Frequency	Impedance (Magnitude) (Ω)
5 Hz	20,000
10 Hz	19,998
⋮	⋮
40 kHz	602
50 kHz	600
100 kHz	600

(4 Marks /*Markah*)

   (i)   anak1
         [anak1]

(2 Marks /*Markah*)

         (A) aanak2
              [aanak2]

(2 Marks /*Markah*)

Question 2
[Soalan 2]

(a) Prove that the differential gain, A_d and common-mode gain, A_{cm} of the INA are,

[Buktikan bahawa gandaan kebezaan, A_d dan gandaan ragam sepunya, A_{cm} bagi INA adalah,]

$$A_d = \frac{1}{2}\left[\frac{R_2}{R_1}\left(\frac{1+\frac{R_4}{R_3}}{1+\frac{R_2}{R_1}}\right) + \frac{R_4}{R_3}\right]$$

$$A_{cm} = \left[\frac{R_2}{R_1}\left(\frac{1+\frac{R_4}{R_3}}{1+\frac{R_2}{R_1}}\right) - \frac{R_4}{R_3}\right]$$

(8 Marks /*Markah*)

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