Cahier Réponses - PSI

Question 1 Bilan des Actions Mécaniques Extérieures :

Théorème ou Principe utilisé, éléments d'application :

Équation d'équilibre :

Question 2

$b\,m_3 =$

Question 3

$\gamma =$

Question 4

$m_i =$

$m_u =$

$h =$

Intérêt de l'hyperstatisme :

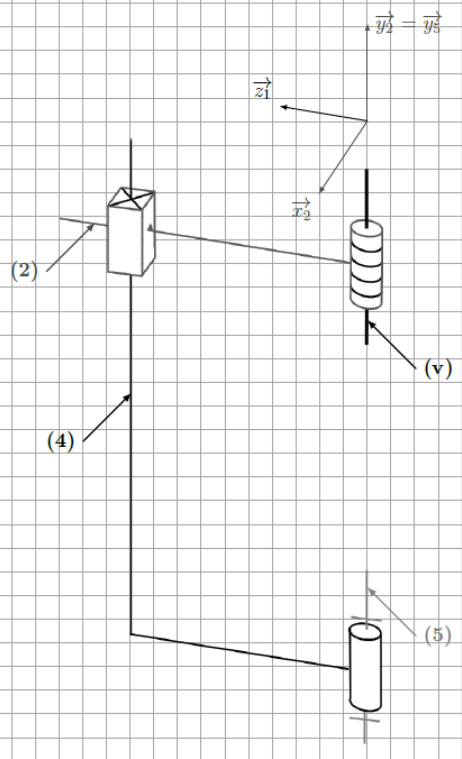
Question 5

Liaison **(N)**/**(5)** :

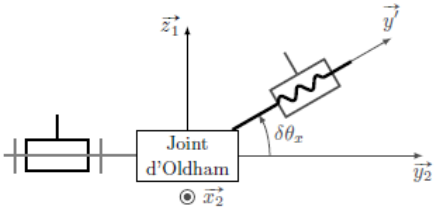
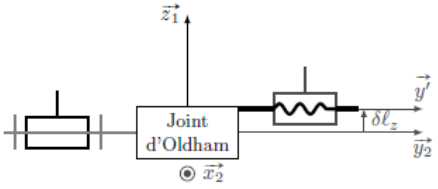
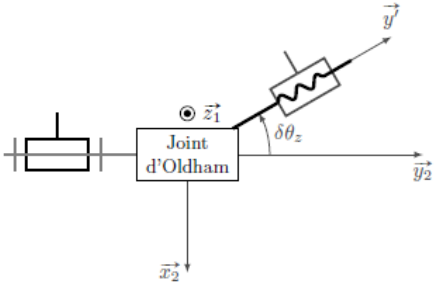
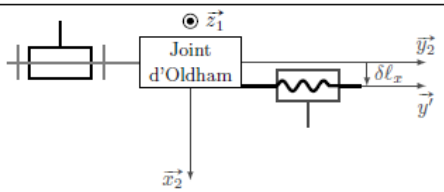
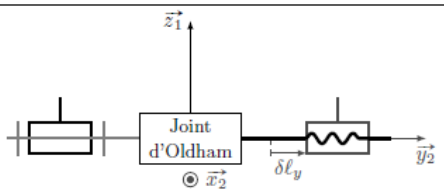
Justification :

Liaison **(N)**/**(v)** :

Justification :



Question 6

Défaut	Rattrapage possible par le joint d'Oldham	
	**OUI**	**NON**
	**OUI**	**NON**
	**OUI**	**NON**
	**OUI**	**NON**
	**OUI**	**NON**

Question 7 Justification $\omega_{4/2} = 0$:

$$k = \frac{\omega_{5/2}}{\omega_{7/2}} =$$

Application numérique :

Question 8

$k_g = \dfrac{\omega_{5/2}}{\omega_{m/2}} =$

Question 9

$d_v =$

Application numérique : $d_v =$

Conclusion vis-à-vis de l'exigence 1.1 :

Question 10

Question 11

Erreur de positionnement :

Conclusion vis-à-vis de l'exigence 1.1 :

Question 12 Plan de symétrie :

$\bar{\bar{I}}_{(O_1,2+3)} =$

Question 13

$\overrightarrow{\sigma}_{O_1,(2+3)/R_0} =$

Question 14 Calcul de $\overrightarrow{\delta}_{O_1,(2+3)/R_0} \cdot \overrightarrow{z_1}$:

$\gamma_{x2}(t) =$

Question 15

Système isolé :

Théorème utilisé :

Justification équation non-linéaire :

Question 16

Question 17

$\frac{\alpha(p)}{\gamma_{x2}(p)} =$

Condition de stabilité :

Rôle stabilisateur du ressort :

Question 18

$A =$

$\omega_0 =$

$\xi =$

Question 19

$C_0 =$

Question 20

Plage de valeurs de k :

Question 21

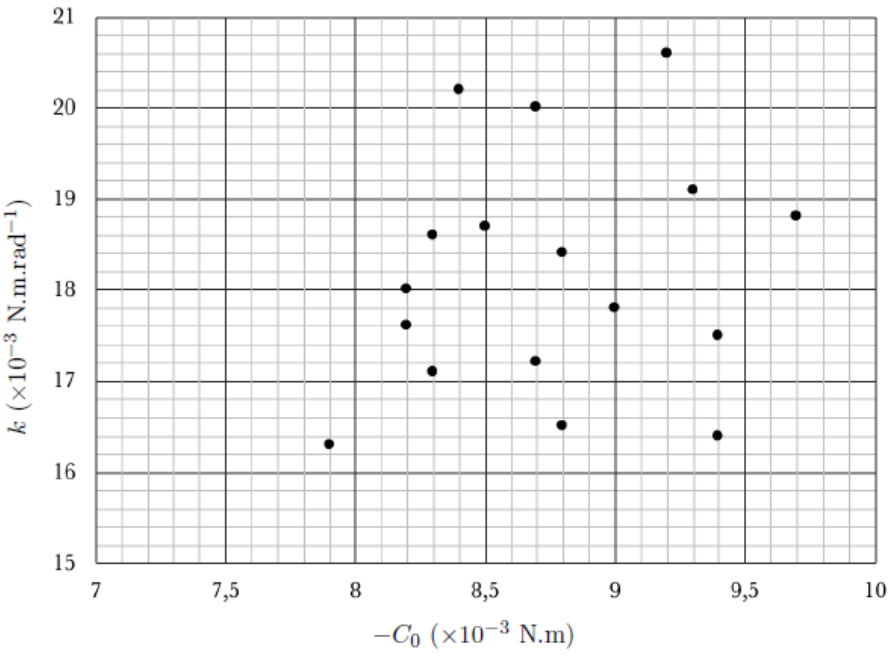


FIGURE A

Question 22

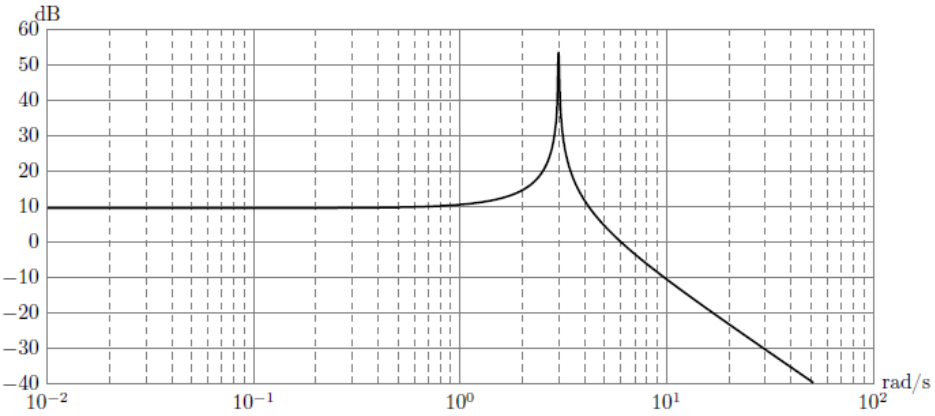


FIGURE B - Diagramme de Bode en gain de $\dfrac{\alpha(p)}{\gamma_{x2}(p)}$

Conclusion :

Question 23

$H_\gamma(p) =$

$K_{\text{HF}} =$ | $a_1 =$

$b_1 =$ | $b_2 =$ | $b_3 =$

Question 24 – Justification de la stabilité :

Justification du choix de K_1 :

$K_1 =$

Question 25

$\tau_2 =$

$\tau_3 =$

Question 26 Exigence 3.2 :

Exigence 3.3 :

Question 27 Intérêt de la chaîne d'action BF :

Question 28

$H_{BO}(p) =$

$\tau_4 =$

Question 29

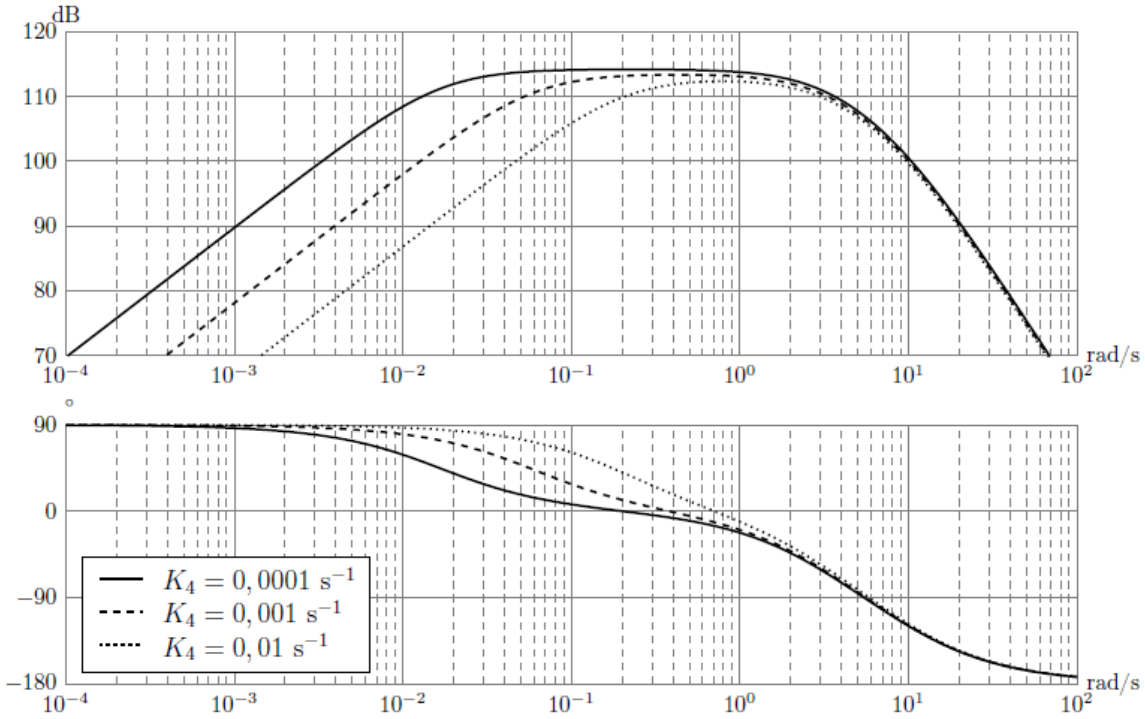


FIGURE C - Diagramme de Bode de l'asservissement en tension $\frac{U(p)}{\gamma_{x2}(p)}$

$K_4 =$

Question 30