



UNIVERSITI KUALA LUMPUR
MALAYSIA FRANCE INSTITUTE

FINAL EXAMINATION
JANUARY 2014 SESSION

SUBJECT CODE : FVD 12403
SUBJECT TITLE : CHASSIS AND BRAKING SYSTEM 1
LEVEL : DIPLOMA
TIME/DURATION : 2 HOUR
DATE :

INSTRUCTIONS TO CANDIDATES

1. Please read the instructions given in the question paper **CAREFULLY**.
 2. This question paper is printed on **ONE** side of the paper.
 3. Please write your answers in the answers booklet provided.
 4. Answers should be written in blue or black ink except for sketching, graphic and illustration.
 5. This question paper consists of **TWO (2)** section. Section A and B. Answer all questions in Section A and 2 question in section B.
 6. Answer all questions in **English**.
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THERE ARE 3 PRINTED PAGES OF QUESTIONS EXCLUDING THIS PAGE.

SECTION A (Total: 60 marks)**INSTRUCTION: Answer ALL question in section A****Please answer inside question booklet.****Question 1**

- (a) List down and describe 3 types of shock absorber other than gas-filled shock absorber and hydraulic shock. (6marks)
- (b) State the purpose of anti-roll bar? Describe the effect of handling when the vehicle is not equipped with a stabilizer bar. (6marks)
- (c) State the difference between,
- i. Sprung weight. (4marks)
 - ii. Unsprung weight. (4marks)

Question 2

- (a) State the difference between coil spring and leaf spring in automotive suspension (5marks)
- (b) With appropriate explanation, describe variable-ratio steering for steering system (4marks)
- (c) With a suitable illustration, explain dual braking system. (5marks)
- (d) List the cause of pedal pulsations for a disc brake system? (6marks)

Question 3

- (a) List **TWO (2)** basic designs for coil spring and make comparison between these spring types. (5marks)
- (a) List **FIVE (5)** components in front suspension which are available for servicing (5marks)
- (b) Draw a picture of positive Chamber when view from front of the vehicle (5marks)
- (d) List the purposes of correct toe setting on vehicle. (5marks)

SECTION B (Total: 40 marks)**Answer two (2) questions only****Question 1**

- (a) Explain in detail the procedure to perform wheel alignment adjustment for Proton BLM 1.3 by using John Bean Aligner Machine. (10marks)
- (b) Explain these terms: (6marks)
1. Toe
 2. Camber
 3. Caster
- (c) List down **FOUR (4)** safety regulations for the TECO automatic tire changer. (4marks)

Question 2

- (a) List **TWO (2)** common types of brake bleeding processes and explain one of the bleeding techniques. (10marks)
- (b) Describe electronically control suspension. (5marks)
- (c) Explain the possible cause if there an excessive play in the steering system? (5marks)

Question 3

- (a) List **FIVE (5)** important requirements for **STEERING BEHAVIOR** (10marks)
- (b) Case: A driver complained that when he was driving, the vehicle tends to drift from one side of the road to the other. This is called wander. List **SIX (6)** common problems in terms of wander. (6marks)
- (c) Describe this matrix tire sizes code: **P 205/75 R 15** (4marks)

END OF QUESTIONS