



C14-M-606

4756

BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—2018
DME—SIXTH SEMESTER EXAMINATION
AUTOMOBILE ENGINEERING

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. List out six components of an automobile.
2. State the functions of frame.
3. State the function of clutch.
4. List out the main types of clutches.
5. State the functions of gearbox.
6. Briefly explain the lubrication of gearbox.
7. State the functions of propeller shaft.
8. State the factors to be considered for suspension system.
9. Briefly explain understeering and oversteering.
10. List out the requirements of an automobile brake.

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PART—B

10×5=50

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 11.** Explain frame construction with a neat sketch. 10
- 12.** Explain the construction and working of single-plate clutch with a neat sketch. 10
- 13.** Explain the working of sliding mesh gearbox with a neat sketch. 10
- 14.** (a) Explain the construction of propeller shaft with a neat sketch. 5
(b) State five differences between semi-floating and full-floating rear axle. 5
- 15.** (a) Give the classification of suspension springs. 4
(b) Explain the construction of leaf spring with a neat sketch. 6
- 16.** Explain the following stub axles with neat sketches : $2\frac{1}{2} \times 4 = 10$
(a) Elliot
(b) Reversed Elliot
(c) Lamoine
(d) Reversed Lamoine
- 17.** Draw a layout of air brake system and explain its working principle. 10
- 18.** (a) What are the different loads acting on the rear axle during transmission? 5
(b) Write short notes on the following : 5
(i) Camber
(ii) King-Pin inclination
