

SECOND SEMESTER DIPLOMA EXAMINATION IN AUTOMOBILE
ENGINEERING — MARCH, 2015

AUTOMOBILE POWER PLANT

[Time : 3 hours

(Maximum marks : 100)

Marks

PART—A

(Maximum marks : 10)

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. Name any two classification of IC engines according to valve arrangement.
2. State the functions of piston.
3. State venturi principle adopted in carburettor.
4. Name various types of diesel engine governors.
5. What is petroil system of lubrication ?

(5x2=10)

PART—B

(Maximum marks : 30)

II Answer *any five* of the following questions. Each question carries 6 marks.

1. Describe valve timing diagram.
2. Name the two types of piston rings and explain their functions.
3. What is the use of idling circuit in carburettor ? Explain with the help of figure.
4. Explain about primary and secondary filters.
5. Describe the working of mechanical governor with neat sketch.
6. With the help of a neat sketch explain the working of gear type oil pump.
7. Discuss the necessity of radiator.

(5x6=30)

PART—C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT – I

III Explain the constructional details of an air cooled engine cylinder block and cylinder head with suitable sketch.

15

OR

	Marks
IV (a) What are the major piston failures ?	8
(b) Explain the constructional features of a camshaft.	7

UNIT – II

V With the help of a neat sketch explain the working of a SU Carburettor.	15
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OR

VI (a) List the main components in petrol engine fuel system and explain briefly the use of each component.	8
(b) Explain about heavy duty air cleaner.	7

UNIT – III

VII (a) Explain distributor type injection pump with sketch.	8
(b) Write short notes on :	
(i) Pintle type nozzle	7
(ii) Multi hole nozzle	7

OR

VIII (a) Explain the working of an injector.	7
(b) Describe any two types of direct injection type combustion chambers with neat sketches.	8

UNIT – IV

IX (a) Sketch and explain the working of vane type pump used in lubrication system of an engine.	7
(b) Explain the working of pump circulation system of cooling with neat sketch.	8

OR

X Write notes on :	
(i) Anti-freeze solution	
(ii) Pressure cap	
(iii) Lubricating oil rating.	15