Seat No: _____ Enrollment No: _____

PARUL UNIVERSITY

FACULTY OF ENGINEERING & TECHNOLOGY

Diploma Engineering, Mid semester Examination

Semester: 5TH **Date: 05/08/2022**

Subject Code: 03612301 **Time: (1hr: 30min)**

Subject Name: Automobile Engine Testing and Diagnosis **Total Marks: 40**

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic.

Q.1 Answer any six out of Ten. (2 Marks Each) **(12)**

1. Name any two special purpose tools used in automobile workshop.
2. Describe "Mechanical efficiency with reference to I.C. engine
3. Write full form of "OBD"
4. Give full name of MPFI and CRDI
5. What is Ridge?
6. What is use of Feeler gauge and Vernier gauge?
7. Define: Thermal efficiency
8. Why compression test is carried out on engine
9. Necessity of lubrication system
10. Define: (1) FHP (2) Volumetric efficiency

Q.2 A) State the causes and remedies for overheating of engine. **(03)**

OR

A) Describe the procedure of radiator cleaning **(03)**

B) Write probable causes and remedies for excessive oil consumption. **(03)**

OR

B) Describe the procedure of testing thermostat valve **(03)**

C) List the types of tests conducted on engine coolant. **(04)**

OR

C) State causes of engine oil deterioration. **(04)**

D) Find the Cubic Capacity-CC of the engine using the following details. **(04)**

Bore – 73.5 mm, Stroke – 73.5 mm, No. of Cylinder – 2

Q.3 A) Explain engine removing process. **(03)**

OR

A) List the different measuring instruments used in Automobile workshop. **(03)**

B) What is the procedure to check valve clearance? **(03)**

OR

B) List the different special tools used in Automobile workshop. **(03)**

C) Which instruments required for checking following : **(04)**

1. Spark plug gap 2. Cylinder bore diameter 3. Piston ovality 4. Crank pin run – out.

OR

C) Explain the procedure to remove the AC and Cooling system of vehicle. **(04)**

D) Explain upper and lower engine disassembly. **(04)**

<u>ગુજરાતી</u>

પ્રશ્ન.૧ દસમાંથી કોઈપણ છ જવાબ આપો.(દરેક માટે ૨ ગુણ) **(૧૮)**

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૨.I.C □□□. □□□□□□□

૩.“OBD” □□□□□□□□□□□□□□□□□□□□

૪.MPFI □□□ CRDI □□□□□□□□□□□□□□□□

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૧૦**વ્યાખ્યાયિત કરો**: (1) FHP (2) **વોલ્યુમેટ્રિક કાર્યક્ષમતા**

પ્રશ્ન.૨ એ) એન્જિનના ઓવરહિટીંગના કારણો અને ઉપાયો જણાવો. **(૦૩)**

અથવા

એ) રેડિયેટરની સફાઈની પ્રક્રિયાનું વર્ણન કરો **(૦૩)**

બી) વધુ પડતા તેલના વપરાશના સંભવિત કારણો અને ઉપાયો લખો. **(૦૩)**

અથવા

બી) □□ **(૦૩)**

સી) □□. **(૦૪)**

અથવા

સી) □□. **(૦૪)**

ડી) નીચેની વિગતોનો ઉપયોગ કરીને એન્જિનની ક્યુબિક કેપેસિટી-CC શોધો. **(૦૪)**

બોર - 73.5 મીમી, સ્ટ્રોક - 73.5 મીમી, સિલિન્ડરની સંખ્યા - 2

પ્રશ્ન.3 □) □□. **(૦3)**

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A) □□□. **(૦3)**

□□) □□? **(૦3)**

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B) □□□. **(૦3)**

C) □□□: **(૦૪)**

1. □□□□□□□□□□□□□□□□□ 2. □□□□□□□□□□□□□□□□□□□ 3. □□□□□□□□□□□□□□□□ 4. □□□□□□□□□□□□□□□-□□□.

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C) □□□□□□□ AC □□□. **(□□)**

□□) □□. **(૦૪)**