

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (AE) (2012 to 2017) (Sem.-4)
AUTOMOTIVE FUELS AND EMISSIONS
Subject Code : BTAE-405
M.code : 54126

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A**Answer briefly :**

1. Brief about the need for alternate fuel.
2. Define gas chromatograph.
3. Write short note on biodiesel.
4. Can alcohol be used as fuel? Give reason.
5. Give some stationary engine applications.
6. What is basic chemistry combustion in 2 stroke SI engine?
7. What are water fuel cells?
8. Define fumigation.
9. What is diesel trap oxidizer?
10. Define Catalysts.

SECTION-B

11. What is the scenario of conventional auto fuels?
12. Discuss about alternate fuel development worldwide.
13. Describe water to gas technology.
14. What is effect of operating variables on emission formation?
15. Brief about
 - a) Carrier for hydrogen
 - b) Fumigation.

SECTION-C

16. Illustrate in detail about test procedure and instrumentation for emission measurement.
17. List the types of liquefied petroleum gases. Brief discuss about them.
18. What type of design changes can be done for control of engine emission reduction? Explain in detail.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.