

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name: Hybrid Vehicles

Subject Code: 4TE08HYV1

Branch: B.Tech (Automobile)

Semester: 8

Date: 26/04/2018

Time: 02:30 To 05:30

Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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Q-1 **Attempt the following questions:** **(14)**

- a) What is hybride vehicle?
- b) What is CVT?
- c) List the components used in electric vehicle?
- d) List the different types of battery used in hybride vehicle?
- e) Give equation for road load?
- f) Give any of non electric hybride system and define its working
- g) Define component of hydraulic system?
- h) Why hybride vehicle is preferable in compare to ordinary vehicle?
- i) Give storage system used in electric hybride vehicle?
- j) List different types of motors used in electric vehicle?
- k) How the power transmission takes place in electric hybride vehicle?
- l) Give any three road characteristics of road to be considered for hybride vehicle?
- m) What type of power plant used in hybrid vehicle?
- n) What is series and parallel connection in electric vehicle?

Attempt any four questions from Q-2 to Q-8

Q-2 **Attempt all questions** **(14)**

- a Explain power transmission of electric vehicle with neat sketch. **07**
- b Why BLDC motor is generally used in electric vehicles? Describe. **07**

Q-3 **Attempt all questions** **(14)**

- a Explain hybrid vehicles performance characteristics of road vehicles **07**
- b Explain dc motor wound with neat sketch **07**

Q-4 **Attempt all questions** **(14)**

- a Explain various components used in hybride vehicles **07**
- b Explain drive train methods of hybride vehicles **07**



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| Q-5 | Attempt all questions | (14) |
| a | Explain lead acid battery with neat sketch | 07 |
| b | Explain series and parallel connection of transmission | 07 |
| Q-6 | Attempt all questions | (14) |
| a | Explain regenerative braking system with neat sketch | 07 |
| b | Give specification of power transmission system | 07 |
| Q-7 | Attempt all questions | (14) |
| a | Give different types of fuel used in automobile? | 07 |
| b | Give components of hydraulic vehicles in details. | 07 |
| Q-8 | Attempt all questions | (14) |
| a | Explain Antilock braking system with neat sketch | 07 |
| b | Give benefits of hybride vehicle over automobile vehicles. | 07 |

