

Reg. No. _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FOURTH SEMESTER B.TECH DEGREE EXAMINATION, JUNE 2017

Course Code: AU206

Course Name: AUTO TRANSMISSION (AU)

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any 3 questions. Ten marks each.

1. What are the resistances offered for vehicle motion and how you calculate the engine power required for propulsion?
2. Explain the different methods employed for clutch actuation or operation
3. Explain the working of a 4-speed constant mesh transmission with neat figure.
4. Explain the working of a manual transmission gear selector mechanism with neat figures.

PART B

Answer any 3 questions. Ten marks each.

5. Explain the construction and working of Ford T-model automatic transmission with figure.
6. Explain the working of COTAL electromagnetic transmission with figure.
7. Explain the working of fluid flywheel with neat figure and characteristic curves.
8. Explain the working of a multistage torque convertor with neat figure and characteristic curves.

PART C

Answer any 4 questions. Ten marks each.

9. a) Explain the working of an epicyclic transmission with neat figure. (6)
- b) Explain the working of CVT. (4)
10. With neat figure explain the working of the hydraulic control of an automatic transmission.
11. a) What are the merits and demerits of an automatic transmission compared to manual transmissions. (5)
- b) Compare Hydrostatic and Hydrodynamic drivers. (5)
12. Explain the characteristics of different arrangements of a hydrostatic transmission according to pumps and motors used.
13. Explain the working of an axial piston pump with neat figure. Also explain fixed and variable displacement pumps.
14. Explain types of components and their working in a battery electric vehicle.