

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
THIRD SEMESTER B.TECH DEGREE EXAMINATION, JANUARY 2017

Course Code: **AU 203**Course Name: **AUTO CHASSIS (AU)**

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any three questions. Each carries 10 marks

1. With neat figures, explain the different types of vehicle construction methods with respect to the frame of the vehicle.
2. Explain the ride characteristics of radial & bias ply tyres with figures and graphs.
3. Explain Hotchkiss drive and torque tube drive with respect to the components that absorb and transfer torque reaction and driving thrust respectively.
4. What are different CV joints available for vehicles? Explain the working of Rzeppa joint and Tripod joint with neat figures.

PART B

Answer any three questions. Each question carries 10 marks

5. According to loads acting, explain the different types of axles used in automobiles with neat figure.
6. Explain the construction & working of differential (in straight & curve movement) with neat figures.
7. Explain the classification of leaf springs. What you meant by tapered leaf springs and helper springs.
8. Explain the construction and working of air suspension system with neat figure.

PART C

Answer any four questions. Each carries 10 marks

9. Explain the working of hydraulic brake system with sketch. Also explain the construction and working of mono piston master cylinder.
10. What the different types of power assisted brakes? Explain the working of vacuum booster in hydraulic brake system.
11. What you meant by ABS? Explain its working and importance.
12. What are the different types of stub axles used with front dead axles? Explain with neat figures.
13. Explain the true rolling condition, turning radius & Ackermann steering mechanism.
14. Explain the conventional steering linkages with recirculating ball type gearbox.