



B.E DEGREE EXAMINATIONS: NOV 2015

(Regulation 2009)

Seventh semester

AUTOMOBILE ENGINEERING

AUE119 : Off Road Vehicles

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. _____ is the process of moving the soil and rock from one location to another location and processing it so that it meets construction requirements.
 - a) Earthmoving
 - b) Dredging
 - c) Ditching
 - d) Transportation
2. The vehicle which is specially designed and constructed for carrying heavy loads under various operations is called as _____.
 - a) Excavators
 - b) Bull dozers
 - c) Scrapper
 - d) Dump truck
3. Bush cutting is otherwise called as forestry _____.
 - a) ripping
 - b) hauling
 - c) Mulching
 - d) cutting
4. _____ are the machines designed principally for cutting and pushing the material over relatively short distance.
 - a) Dozer
 - b) Tractor
 - c) Stumpers
 - d) Earth mover
5. Bowl capacity of a loaded scraper is expressed either as _____ capacity.
 - a) Heaped
 - b) Struck
 - c) Payload
 - d) Off load
6. The face shovel is designed primarily for _____.
 - a) Soil loosening
 - b) Trimming
 - c) Bulk Excavation
 - d) Haulage
7. Agriculture implements are used for _____ work.

- a) Soil stabilization
 - b) Trimming
 - c) Excavation
 - d) Haulage
8. The main power of the tractor is applied through _____ .
- a) Draw Bar
 - b) Power Lift
 - c) Belt Pulley
 - d) PTO
9. _____ is a device on which brake pads and pistons are mounted.
- a) Piston
 - b) Governor
 - c) Clutch
 - d) Caliper
10. Generally brake rotors are made of _____ .
- a) Mild steel
 - b) Ceramic Matrix
 - c) Aluminum Alloy
 - d) Asbestos

PART B (10 x 2 = 20 Marks)

11. Define dredging.
12. Write down the sequential operation of earth moving process.
13. Explain the functions of Angle dozers.
14. Write down the advantages of trucks.
15. Explain the work cycle of shovel.
16. Write down the limitations of draglines?
17. What is meant by PTO and where it is used?
18. What do you mean by drawbar?
19. How do hydro pneumatic suspension system work?
20. Define brake fade.

PART C (5 x 14 = 70 Marks)

21. a) Explain in detail about various operations involved during site preparation.

(OR)

- b) Write a detailed notes on multi axle vehicles.

22. a) With a neat sketch illustrate the working of backhoe loaders and its applications.

(OR)

- b) Elaborate in detail about the functions of (i) bush cutters (ii) tree dozers (iii) rippers in the Earth moving process?

23. a) Classify the types of graders and demonstrate their working in detail with a neat sketch.

(OR)

b) Define the work cycle of power shovels & its bucket capacity with a neat sketch.

24. a) Summarize the construction of tractor and its utilization in agriculture.

(OR)

b) Explain briefly about construction details of Tankers with a neat sketch.

25. a) Explain briefly about OCDB & Dry Disc caliper brakes with neat sketch.

(OR)

b) Write elaborately about the safety systems and warning systems used in dumpers.
