

B.TECH. DEGREE EXAMINATION, APRIL-2013

Eighth Semester, Branch: Automobile Engineering

SPECIAL TYPES OF VEHICLES (AU010803)

(SAMPLE QUESTION PAPER)

Time: Three hours

Maximum: 100 marks

Part A (Answer all. Each question carries 3 marks)

1. What you mean by skid steering? Write the advantage of it.
2. What is an excavator-loader? Write equation to find the output of an excavator and explain terms in it.
3. Explain the advantages and disadvantages of articulated dump trucks.
4. What are the factors affecting capacity of a crane and how the rating of a crane is being done?
5. Define the word tractor. What are the types of tractors available?

Part B (Answer all. Each question carries 5 marks)

6. Explain the types of hydraulic control systems with neat figures.
7. Explain the type of shovel-buckets with their advantages and disadvantages.
8. Draw and explain any three attachments for a lift truck.
9. Explain the parameters influencing the degree of compaction of a vibrating roller.
10. Explain the difference between a wheel dozer and crawler dozer.

Part C (Each question carries 12 marks)

11. Explain the construction and working of an under carriage with neat sketch.

OR

12. What is power takeoff? Explain different drive systems for PTO shaft with figures.

13. Explain the working of a dragline with the help of figures. Also write the equation for its production and explain what the correction factors involved.

OR

14. With the suitable sketches explain various operations that can be done using a motor grader.

15. Explain the working of different types of off-highway dump trucks with figures.

OR

16. With sketch, explain the working and application of a fork lift truck

17. What are the types of cranes used today? Explain the working, advantages and disadvantages of mobile tower crane using suitable sketch.

OR

18. With sketch, explain working of a rubber tyred compactor. How load, speed and inflation pressure affects its operations.

19. What are types of scrapers? Explain construction and working of any one of it with suitable diagram.

OR

20. With sketches explain the difference between a bulldozer and loader. What are the operations that can be done using a loader?