



**B.E/B.TECH DEGREE EXAMINATIONS: NOV/DEC 2024**

(Regulation 2018)

Seventh Semester

**AUTOMOBILE ENGINEERING**

U18AUE0018: Vehicle Transport Management

**COURSE OUTCOMES**

- CO1:** Collect the concept of personal management objectives and functions.  
**CO2:** Explain the passenger transport operation.  
**CO3:** Explain the good transport management systems.  
**CO4:** Describe the Motor Vehicle Act.  
**CO5:** Outline the process of traffic engineering and its management.  
**CO6:** Extend knowledge of fleet management.

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 2 = 20 Marks)**

**(Answer not more than 40 words)**

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|---|-----|-------------------|
| 1. Define the primary objective of personnel management.                                | CO1 | [K <sub>1</sub> ] |
| 2. Explain the importance of job descriptions in the selection process.                 | CO1 | [K <sub>2</sub> ] |
| 3. List the basic principles of fare charging in passenger transport operations.        | CO2 | [K <sub>1</sub> ] |
| 4. Explain the importance of fleet maintenance in transport operations.                 | CO2 | [K <sub>2</sub> ] |
| 5. State the role of Management Information System (MIS) in goods transport operations. | CO3 | [K <sub>1</sub> ] |
| 6. Explain the purpose of scheduling in goods transport operations.                     | CO3 | [K <sub>2</sub> ] |
| 7. Recall the key requirements for vehicle registration under the Motor Vehicle Act.    | CO4 | [K <sub>1</sub> ] |
| 8. Enumerate the purpose of a fitness certificate for vehicles.                         | CO4 | [K <sub>1</sub> ] |
| 9. Define space mean speed and its significance in traffic flow analysis.               | CO5 | [K <sub>1</sub> ] |
| 10. Outline the purpose of a time-space diagram in traffic engineering.                 | CO5 | [K <sub>2</sub> ] |

**Answer any FIVE Questions:-**

**PART B (5 x 16 = 80 Marks)**

**(Answer not more than 400 words)**

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|---|---|-----|-------------------|
| 11. a) Compare different types of employment tests used in the selection process, and evaluate their effectiveness in predicting job performance. | 8 | CO1 | [K <sub>4</sub> ] |
|---|---|-----|-------------------|

- b) Discuss the objectives and methods of employee training programs, and suggest improvements for increasing their effectiveness in organizational development. 8 CO1 [K<sub>5</sub>]
12. a) Analyze the challenges in fleet management and discuss solutions to improve fleet performance and efficiency. 8 CO2 [K<sub>4</sub>]
- b) Discuss the role of public relations, propaganda, and publicity in passenger transport organizations, and suggest improvements to enhance public engagement. 8 CO2 [K<sub>5</sub>]
13. a) Analyze the importance of advanced traffic management techniques in goods transport operations, and evaluate how traffic navigation and GPS technology improve efficiency. 8 CO3 [K<sub>4</sub>]
- b) Discuss the safety and environmental challenges associated with the storage and transportation of petroleum products, and suggest methods to mitigate these risks. 8 CO3 [K<sub>5</sub>]
14. a) Analyze the different types of commercial vehicles described under the Motor Vehicle Act and evaluate their specific operational requirements. 8 CO4 [K<sub>4</sub>]
- b) Discuss the importance of traffic signs and tests for driving competency under the Motor Vehicle Act, and suggest improvements for road safety. 8 CO4 [K<sub>5</sub>]
15. a) Analyze the relationship between speed, flow, and density using fundamental diagrams, and evaluate their application in traffic congestion management. 8 CO5 [K<sub>4</sub>]
- b) Discuss the key methods used in traffic volume, travel time, and density measurements, and suggest how advanced technologies can improve traffic management. 8 CO5 [K<sub>5</sub>]
16. a) Apply the principles of fleet management and scheduling to improve the operational efficiency of a passenger transport organization. Consider factors like vehicle maintenance, driver training, route planning, and fuel management in your approach. 8 CO6 [K<sub>3</sub>]
- b) Utilize traffic flow and density measurement techniques to optimize traffic signal timings in a congested urban area. Implement tools like time-space diagrams, fundamental diagrams, and real-time traffic data to reduce congestion and improve vehicle flow. 8 CO6 [K<sub>3</sub>]

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