

PART B (10 x 2 = 20 Marks)

(Answer not more than 40 words)

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| 11. List the basic electrical component of an Vehicle. | CO1 | [K ₂] |
| 12. What is the use of neutral safety switch? | CO1 | [K ₂] |
| 13. Differentiate sensor and actuators. | CO1 | [K ₂] |
| 14. Compare Active and Passive safety system. | CO1 | [K ₂] |
| 15. What is debugging? | CO3 | [K ₂] |
| 16. List some components of body electronics of a car. | CO1 | [K ₂] |
| 17. What is the Engine management system? List any two functionalities. | CO3 | [K ₂] |
| 18. What is infotainment system in car? | CO2 | [K ₂] |
| 19. What is SPI? | CO2 | [K ₂] |
| 20. How many devices does the USB supports? | CO2 | [K ₂] |

Answer any FIVE Questions:-

PART C (5 x 14 = 70 Marks)

(Answer not more than 300 words)

Q.No. 21 is Compulsory

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|---|-----|-----------------------|
| 21. With neat sketch explain the driver vehicle environment system of an Vehicle. | CO2 | [K ₂] |
| 22. Enumerate the working principle of airbag system with appropriate diagrams. | CO2 | [K ₂] |
| 23. With neat sketch explain IDE and its importance in the automobile. | CO3 | [K ₂] |
| 24. Explain in detail about electronic engine management system with neat diagram. | CO2 | [K ₂] |
| 25. With a neat sketch give details about the working principle of traction control system. | CO2 | [K ₂] |
| 26. (i) Write short notes on I2C communication protocol? | (7) | CO2 [K ₂] |
| (ii) Write short notes on SPI Communication protocol? | (7) | CO2 [K ₂] |
| 27. Explain the importance of CAN protocol in Automobile and explain its merits and demerits. | CO2 | [K ₂] |
