

Total number of printed pages : 2

NB-XII/AG(V)/1

2024

**Automotive (Vocational)**

Total marks: 50

Time : 2 hours

**General instructions:**

- i) *Approximately 10 minutes is allotted to read the question paper and revise the answers.*
- ii) *All questions are compulsory.*
- iii) *The question paper consists of 21 questions.*
- iv) *Marks allocated to every question are indicated against it.*

**N.B:** *Check that all pages of the question paper are complete as indicated on the top left side.*

**1. Choose the correct answer from the given alternatives: 10x1=10**

- i. Which manual contains the information to improve the quality of tasks?
  - (a) Service manual
  - (b) Training manual
  - (c) Policy manual
  - (d) User manual
- ii. Which of the following is considered as the brain of the cooling system?
  - (a) Coolant
  - (b) Thermostat
  - (c) Fan
  - (d) Radiator
- iii. It serves as a mechanical link between the engine and transmission of a vehicle
  - (a) Pressure plate
  - (b) Clutch
  - (c) Flywheel
  - (d) Piston
- iv. The wheels and axles of a vehicle are mechanically connected to the chassis by a system of springs or
  - (a) Solid axle
  - (b) Twist beam
  - (c) Shock absorbers
  - (d) Shackle
- v. The device that turns chemical energy into electrical energy is known as
  - (a) Battery
  - (b) Regulator
  - (c) Relay
  - (d) Motor
- vi. Avoid making assumptions or forming opinions before fully understanding the speaker's message to overcome barriers to active listening is
  - (a) Distraction
  - (b) Physical barrier
  - (c) Emotion
  - (d) Prejudgements
- vii. File, edit, view etc are some options available in
  - (a) Menu bar
  - (b) Tool bar
  - (c) Formula bar
  - (d) Title bar
- viii. Seat belt is a part of
  - (a) Vehicle safety system
  - (b) Driver assistance system
  - (c) Vehicle driving system
  - (d) Vehicle information system
- ix. Which of the following is not a part of solar and wind energy?
  - (a) Solar panel manufacturing
  - (b) Wind turbine manufacturing
  - (c) Electric vehicle manufacturing
  - (d) Solar panel maintenance

- x. Someone who feels anxious, has frequent mood swings and is stressed is an example of
- |                   |                 |
|-------------------|-----------------|
| (a) Extraversion  | (b) Neuroticism |
| (c) Agreeableness | (d) Openness    |

**Answer the following questions in one word or one sentence:**

- |  |   |
|--|---|
| 2. What is infotainment system?                        | 1 |
| 3. What is multi point fuel injection?                 | 1 |
| 4. Name any two types of differentials in automobiles. | 1 |
| 5. Mention any two types of data in calc.              | 1 |
| 6. What are the two types of motivation?               | 1 |
| 7. Give one application of ignition engine.            | 1 |
| 8. Write two stages of active listening.               | 1 |
| 9. Define the term green job.                          | 1 |

**Answer the following questions in 20-50 words:**

- |  |       |
|--|-------|
| 10. Write two uses of service manual in workshop.                  | 2     |
| 11. Draw poppet valve and label any two parts.                     | 1+1=2 |
| 12. Write two advantages and two disadvantages of propeller shaft. | 2     |
| 13. Differentiate between wheel balancing and wheel alignment.     | 2     |
| 14. Define (i) Headlights (ii) Fog lamps.                          | 2     |
| 15. Write the two benefits of automated manual transmission.       | 2     |
| 16. Mention two functions of vehicle suspension system.            | 2     |
| 17. Briefly explain any two types of entrepreneurs.                | 2     |

**Answer the following questions in 60-100 words:**

- |   |       |
|---|-------|
| 18. (a) Explain any four stages of engine over hauling.                     |       |
| <b>Or</b>   | 4     |
| (b) Explain briefly any four types of clutch.                               |       |
| 19. Explain four benefits of common rail direct injection (CRDI) system.    | 4     |
| 20. (a) Explain briefly ignition system with the help of a circuit diagram. |       |
| <b>Or</b>   | 2+2=4 |
| (b) Draw any four electrical symbols and define them.                       |       |
| 21. Explain (i) Reversible steering (ii) Irreversible steering.             | 2+2=4 |

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