

2025

Electronics (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. In Flemming's left-hand rule, the thumb represents the direction of
 - (a) Force
 - (b) Current
 - (c) Magnetic field
 - (d) Electric field
 - ii. Which of these would you install in your house to protect your house wiring and appliances from abnormal or fault current?
 - (a) Generator
 - (b) Circuit breaker
 - (c) Transformer
 - (d) Motor
 - iii. What type of juicer is also known as cold press juicer?
 - (a) Reamers
 - (b) Centrifugal
 - (c) Juicing press
 - (d) Masticating juicer
 - iv. Which of the following serves as a basic principle of working for many home appliances in house hold applications?
 - (a) Heating effect of current
 - (b) Electromagnetism
 - (c) Photo electric effect
 - (d) Conductor
 - v. Ram's house caught fire, upon inspection; the source of fire was due to short circuit. Which type of fire is it?
 - (a) Type A
 - (b) Type B
 - (c) Type C
 - (d) Type D
 - vi. Avinuo is congratulating Senti on her success by giving her a handshake and patting on her shoulder. Which type of non-verbal communication are they displaying?
 - (a) Paralanguistics
 - (b) Kinesics
 - (c) Olfatics
 - (d) Haptics
 - vii. Under the primary goals of sustainable development, using eco-friendly materials falls under
 - (a) Economic growth
 - (b) Cultural diversity
 - (c) Environmental protection
 - (d) Social inclusion
 - viii. Emotional, mental, physical and social response to any perceived threats and demands are called
 - (a) Self-belief
 - (b) Stress
 - (c) Strategy
 - (d) Meditation

- ix. Which of the following is not a commercial function of an entrepreneur?
 - (a) Production
 - (b) Finance
 - (c) Policy making
 - (d) Accounting
- x. One of the main reasons why a microwave does not heat is due to its failure in
 - (a) Magnetron
 - (b) Wave guide
 - (c) Relay
 - (d) Diode

Answer the following questions in one word or one sentence:

- 2. Define RPM of amotor. 1
- 3. Name the two types of relays. 1
- 4. What is a juicer? 1
- 5. Write any two examples of e-waste. 1
- 6. Bokivi, a class X student is working hard in his studies in hopes that he would become a state topper. What kind of motivation is he predominantly exhibiting? 1
- 7. Who is an entrepreneur? 1
- 8. Why is feedback important in communication? 1
- 9. What is sustainable development? 1

Answer the following questions in 20-50 words:

- 10. Write any two damages caused by virus in a computer system. 2
- 11. Write any two reasons to quit fighting a fire and to evacuate immediately. 2
- 12. Write any two housekeeping practices that is required for safety from chemical hazards. 2
- 13. State the function of the following feature of microwave:
 - (i) Smart display (ii) Child lock 1+1=2
- 14. What is a mixer? State the two types of mixers. 1+1=2
- 15. Differentiate between Brushed motors (BDC) and Brushless motors (BLDC). 2
- 16. What is meant by Normally Open (NO) and Normally Closed (NC) relays? 2
- 17. Write the steps to clean a mixer using alcohol. 2

Answer the following questions in 60-100 words:

- 18.a. What is a fuse? Explain briefly the two types of fuses. 1+3=4
- Or**
- b. What is a circuit breaker? Explain briefly the working principle of circuit breaker.
- 19. Explain any four commonly occurring faults in mixer grinder. 4
- 20. Explain briefly how does a microwave oven turns electricity into heat. 4
- 21. a. Explain the various electric shock treatments. 4
- Or**
- b. List and explain any four electrical hazards.
