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HS/XII/V/EH/21

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ELECTRONICS AND HARDWARE

(Vocational Course)

(Installation Technician Computing Peripherals)

Full Marks : 30

Time : 1 hour

The figures in the margin indicate full marks for the questions

1. Choose the correct answer : 1×4=4

(a) Miniature circuit breaker is a small

(i) fuse

(ii) magnetic switch

(iii) electromagnetic switch

(iv) two-way switch

(b) A simple enclosed length of wire that has low melting point is known as

(i) resistor

(ii) fuse

(iii) circuit breaker

(iv) thermistor

(2)

(c) SF_6 gas is transported in

- (i) air cylinder
- (ii) gas cylinder
- (iii) liquid form in cylinder
- (iv) solid form

(d) The technology behind AC motor speed consists of

- (i) rectifier unit
- (ii) DC circuit
- (iii) inverter unit
- (iv) All of the above

2. Fill in the blanks :

1×4=4

(a) PLC stands for ____.

(b) The meter constant of single-phase energy meter is expressed in terms of ____.

(c) The voltage of 3-phase system is ____.

(d) ____ is used to control the RPM of motor.

(3)

3. Answer the following in *1* word or *1* sentence each
(any *four*) : 1×4=4

- (a) What is three-phase system?
- (b) What is an alternator?
- (c) What is relay?
- (d) What is the function of PT?
- (e) What is distribution transformer?

4. Answer the following in *3* or *4* sentences each
(any *three*) : 2×3=6

- (a) What is a contactor? Draw the circuit connection of motor using contactor.
- (b) What is soft starter? Why is it needed?
- (c) Explain with circuit diagram the two types of connection in three-phase system.
- (d) Differentiate between RCCB and ELCB.
- (e) What is circuit breaker? Give its types.

(4)

5. Answer the following essay-type questions (any *three*) :

4×3=12

- (a) Draw the block diagram of solar power energy and explain the working principle and function of each part.
- (b) What is transformer? Differentiate between single-phase and three-phase transformer.
- (c) Explain with diagram the working and construction of a current transformer.
- (d) What is communication? Explain the method of communication.

★ ★ ★