DAY — **16** SEAT NUMBER | | | | | | |

2025	III	04	1500	**J-373**	(E)

MULTISKILL TECHNICIAN (E3) (ELECTRICAL)

Time : 3 Hrs. **(4 Pages)** **Max. Marks : 80**

Note : *(1) All questions are compulsory.*

(2) Draw neat and well labelled diagrams wherever necessary.

(3) Figures given on the right side are full marks.

(4) Write answers to all questions on new pages.

Q. 1. **(A)** Select the correct alternatives and rewrite the sentences : (5) **[20]**

(1) From the following metals, _____ is not hazardous to human health.

(a) mercury (b) gold

(c) cadmium

(2) _____ may affect liver and kidney in human body.

(a) Sulphur (b) Lead

(c) Iron

(3) _____ helps to focus light in desired direction in LED.

(a) Driver (b) Bulb terminal

(c) Reflector

(4) In series circuits all electrical appliances are connected in a _____.

(a) sequence (b) zigzag

(c) alternate

(5) _____ Motor is used in room cooler.

(a) Three phase induction

(b) Single phase induction

(c) Submersible

(B) Match the words from the following 'A' and 'B' groups : (5)

Group 'A'		Group 'B'	
(a)	Cadmium	(1)	Filter extract bacteria and virus
(b)	Heat sink	(2)	H_2
(c)	Mixer	(3)	Used in batteries and resistors
(d)	RO membrane	(4)	Cool off the lamp
(e)	Electric frequency	(5)	Levigate dry and wet materials

(C) State whether the following statements are True or False : (5)

(1) There is possibility of cancer due to chromium in E-waste.

(2) LED operates only on alternating current.

(3) The materials through which electric current flows without any resistance are called good conductors.

(4) Juicer is used to retrieve juices of fruits and vegetables.

(5) Increase in demand of electronic goods is the main reason behind increase in E-waste.

(D) Answer the following questions in 'one' sentence only : (5)

(1) Define recycling of E-waste.

(2) Write down the full form of SMPS.

(3) Write the function of 'khas pads' in room cooler.

(4) Write the function of sediment filter in water purifier.

(5) Which disease occurs due to calcium contaminated water?

Q. 2. Answer the following questions in short (Any FOUR) : [12]

(1) Enlist E-waste ingredients which are not hazardous to human health.

(2) How to troubleshoot faults in driver circuit in LED lamp?

(3) Write information about speed control switch in room cooler.

(4) Write the function of booster pump in water purifier.

(5) Write the uses of Blender.

(6) Write the reasons behind not starting a room cooler motor.

Q. 3. Answer the following questions in short (Any FOUR) : [12]

(1) Write the method of segregation for cathode ray tube.

(2) Draw the symbol of thermistor and write down its applications.

(3) Write a short note on resistor.

(4) What do you mean by a balance sheet?

(5) Write in short about water tray in room cooler.

(6) Draw the diagram of UV choke.

Q. 4. Answer the following questions in detail (Any THREE) : **[12]**

(1) Write down the effect on health due to lead in E-waste.

(2) Write about LED driver.

(3) Write the functions of fuse.

(4) What precautionary measures need to be taken during mixer usage?

(5) Write information about air blower of the room cooler.

Q. 5. Answer the following questions in detail (Any THREE) : **[12]**

(1) Enlist names of different parts of mixer.

(2) Write the fitting material required to install water purifier.

(3) Write the reuse process in E-waste management.

(4) Write about shaft and blades of mixer.

(5) Enlist the tools and devices required to repair LED lamp.

Q. 6. (A) Answer the following questions in detail (Any ONE) : (6) **[12]**

(1) Write about capital needed for starting business with required items.

(2) Write different parts of water purifier with their functions.

(B) Answer the following questions in detail (Any ONE) : (6)

(1) Write about the faults which occur in a room cooler.

(2) Draw the diagram of mixer.

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