

TVET NATIONAL EXAMINATIONS, LEVEL 5, 2022-2023

INSTRUCTIONS TO CANDIDATES (ANSWER BOOKLET)

1. A candidate should fill in the actual names and the Index number on the cover of this questions and answer booklet on the provided place.
2. It is illegal for a candidate to write any of names, Index number or school name inside the answer booklet.
3. No candidate should remove or tear any pages or part of it in the answer booklet.
4. A candidate should answer in the language in which the examination is set.
5. A candidate should sign on the sitting plan when submitting the answer booklet. He/she has also to check if the answer booklet is well sealed.
6. No extra paper is allowed in the examinations room. If a candidate is caught with it his/her results will be nullified.
7. No candidate is allowed to write answers not related to the subject being sat for, otherwise it will be considered as a cheating case.
8. Write your answers on the 16 lined pages (From page 7 to page 22).
9. Use the last non-lined pages as draft.
10. Results for any candidate who is caught in examination malpractices are nullified. The cheating can be recognized during examinations administration, marking exercise or even thereafter.

- N.B:** 1) After results publication, there is no remarking and no candidate is given his/her answer booklet for review. This answer booklet is a property of NESAs.
- 2) Claims are only received online within 30 days after results publication. A link will be provided after results publication.

T 080_ Maintain Electronic Display

TVET NATIONAL EXAMINATIONS, LEVEL 5, 2022-2023

OPTION/TRADE: ELECTRONICS SERVICES

SUBJECT/EXAM: MAINTAIN ELECTRONIC DISPLAY

DURATION: 3 HOURS

INSTRUCTIONS TO CANDIDATES (QUESTION PAPER)

This Exam paper is composed of Three Sections (A, B, and C). Follow the instructions given below, and answer the indicated questions for a total of 100 marks

Section **A**: Fourteen (14) questions, all **Compulsory** **55 marks**

Section **B**: Among the five (5) questions, attempt any three (3) **30 marks**

Section **C**: Among the two (2) questions, attempt any one (1) **15 marks**

Allowed materials:

- Blue or black pen
- Mathematical set

Note:

Every candidate is required to carefully comply with the provided assessment instructions.

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SECTION A: Attempt all questions

(55 marks)

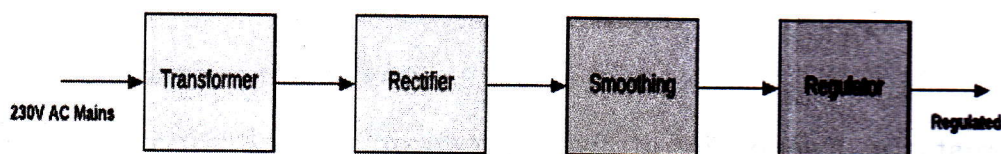
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- 01.** What are the measurements that must be performed after repairing a TV receiver power supply? **(5marks)**
- 02.** What are the methods used to get backlight in LCD Display? **(2marks)**
- 03.** Identify any four (4) equipment used for TV receiver repair. **(4marks)**
- 04.** From the list below, identify the commonly used types of TV screens. **(3marks)**
(Cathode Ray Tube, Laptop, Light Emitting Diode, Light Dependent Resistor, Liquid Crystal Display, Seven-Segment Display).
- 05.** Distinguish between an invoice and proforma invoice. **(4marks)**
- 06.** What are the general faults that occur in TV receiver audio amplifier circuit? **(4marks)**
- 07.** Illustrate all the steps of replacing faulty synchronizing IC. **(4marks)**
- 08.** Explain why a CRT screen needs more attention before disassembling it. **(4marks)**
- 09.** Fill the gap in the sentence below using the following terms: **(2marks)**
(Multimeter, ammeter, tachmeter, voltmeter, ohmmeter).

Digital combines three (3) equipment for measuring different electrical quantities;for measuring resistance..... for measuring current andfor measuring potential difference (PD).

Section C: Attempt only one (1) question

(15 marks)

20. Using the block diagram below draw a circuit diagram that provides 12V at the output and explain each part. **(15marks)**



21. A 12V battery is connected in a circuit having three series-connected resistors having resistances of 4Ω , 9Ω and 11Ω .
- a) Determine the current flowing through and the p.d. across the 9Ω resistor. Find also the power dissipated in the 11Ω resistor. **(10marks)**
- b) Design the circuit and show how you can connect ammeter in order to measure the current passing through the circuit. **(5marks)**

END OF ASSESSMENT

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10. Explain any four (4) elements that may affect a site inspection when public TV is expected to be installed. **(4marks)**
11. From the following list of TV receiver faults, choose the faults that occur in color synchronizing block: **(5marks)**
- a) No input voltage at the synchronizing IC
 - b) No image on the screen
 - c) Unbalanced colors on the screen
 - d) Faulty EEPROM
 - e) Harmful sound
 - f) Faulty CRT colors Amplifying transistors
 - g) Power supply cutoff due to short circuit of colors synchronizing IC.
 - h) Power indicator LED does not work
 - i) Faulty colors pathways
12. Using the sequence order, enumerate the steps that should be followed to install a digital display for advertising a company. **(5marks)**
13. Nowadays, many people prefer to use LCD based TV instead of CRT TV screen. Identify any five advantages of LCD screen over CRT screen. **(5marks)**
14. How is an LCD screen connected to a computer? **(4marks)**

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Section B: Attempt any three (3) questions

(30 marks)

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- 15. a)** The CRT screen presents sound but no raster; what are the causes and solution of the fault? **(4marks)**
- b)** List the six (6) general faults that occur in extra high-tension supply. **(6marks)**
- 16. a)** Contrast the sweep circuit from synchronizing circuit of TV Receiver. **(4marks)**
- b)** Propose any three (3) faults that may affect each circuit. **(6marks)**
- 17. a)** Differentiate an in-kernel from out-of-kernel driver. **(7marks)**
- b)** Complete the sentence below by using the terms from the following list: (Managing, creating, providing, initializing, input and output). **(3marks)**

The common tasks performed by device drivers include
..... devices, managing device....., and
..... an interface for device configuration.

- 18.** Discuss the conditions under which fuses may blow repeatedly in a TV power supply circuit. **(10marks)**
- 19.** The power indicator is ON but there is no image visible on the client's TV receiver; instead, it displays a blue screen. As technician examine the synchronization circuit and predict potential causes of the fault. **(10marks)**