

|                |                        |
|----------------|------------------------|
| For Office use | Space for Digital Data |
|----------------|------------------------|

**தமிழ் நாடு அரசு**

தொழில்நுட்பக் கல்வித் துறை, சென்னை 600 025 - வாரியத் தேர்வுகள்

அடுத்தப் பக்கத்தில் கொடுக்கப்பட்டுள்ள குறிப்புகளை படிக்கவும் (Read the instructions given in the next page)

| Q. No. | A | B | C | Q. No. | A | B | C | Q. No. | A | B | C | Q. No.      | A | B | C |
|--------|---|---|---|--------|---|---|---|--------|---|---|---|-------------|---|---|---|
| 1.     |   |   |   | 9.     |   |   |   | 17.    |   |   |   | 25.         |   |   |   |
| 2.     |   |   |   | 10.    |   |   |   | 18.    |   |   |   | 26.         |   |   |   |
| 3.     |   |   |   | 11.    |   |   |   | 19.    |   |   |   | 27.         |   |   |   |
| 4.     |   |   |   | 12.    |   |   |   | 20.    |   |   |   | 28.         |   |   |   |
| 5.     |   |   |   | 13.    |   |   |   | 21.    |   |   |   | 29.         |   |   |   |
| 6.     |   |   |   | 14.    |   |   |   | 22.    |   |   |   | 30.         |   |   |   |
| 7.     |   |   |   | 15.    |   |   |   | 23.    |   |   |   | 31.         |   |   |   |
| 8.     |   |   |   | 16.    |   |   |   | 24.    |   |   |   | Total Marks |   |   |   |
|        |   |   |   |        |   |   |   |        |   |   |   |             |   |   |   |

**For Revaluation**

| For Central Valuation |   |   |    |        |   |    |   |        |   |   |   |        |   |   |   |
|-----------------------|---|---|----|--------|---|----|---|--------|---|---|---|--------|---|---|---|
| Q. No.                | A | B | C  | Q. No. | A | B  | C | Q. No. | A | B | C | Q. No. | A | B | C |
| 1.                    |   |   | 10 | 9.     | 2 |    |   | 17.    |   |   |   | 25.    |   |   |   |
| 2.                    |   | 4 | 0  | 10.    | 2 |    |   | 18.    |   |   |   | 26.    |   |   |   |
| 3.                    |   |   |    | 11.    | 0 | 10 |   | 19.    |   |   |   | 27.    |   |   |   |
| 4.                    |   | 0 |    | 12.    | 0 |    |   | 20.    |   |   |   | 28.    |   |   |   |
| 5.                    | 2 | 3 |    | 13.    |   |    |   | 21.    |   |   |   | 29.    |   |   |   |
| 6.                    |   |   |    | 14.    |   |    |   | 22.    |   |   |   | 30.    |   |   |   |
| 7.                    |   |   |    | 15.    |   |    |   | 23.    |   |   |   | 31.    |   |   |   |
| 8.                    |   |   |    | 16.    |   |    |   | 24.    |   |   |   |        |   |   |   |

**For Central Valuation**

| Q. No. | A | B | C  | Q. No. | A  | B | C | Q. No. | A | B | C | Q. No. | A | B | C |
|--------|---|---|----|--------|----|---|---|--------|---|---|---|--------|---|---|---|
| 1.     |   |   | 10 | 9.     | 2  |   |   | 17.    |   |   |   | 25.    |   |   |   |
| 2.     |   | 4 | 0  | 10.    | 2  |   |   | 18.    |   |   |   | 26.    |   |   |   |
| 3.     |   |   |    | 11.    | 10 |   |   | 19.    |   |   |   | 27.    |   |   |   |
| 4.     |   | 0 |    | 12.    | 0  |   |   | 20.    |   |   |   | 28.    |   |   |   |
| 5.     | 2 | 3 |    | 13.    |    |   |   | 21.    |   |   |   | 29.    |   |   |   |
| 6.     |   |   |    | 14.    |    |   |   | 22.    |   |   |   | 30.    |   |   |   |
| 7.     |   |   |    | 15.    |    |   |   | 23.    |   |   |   | 31.    |   |   |   |
| 8.     |   |   |    | 16.    |    |   |   | 24.    |   |   |   |        |   |   |   |

Question Paper Code No.

வினாத்தாள் எண்

|   |   |   |   |
|---|---|---|---|
| 1 | 3 | 2 | 4 |
|---|---|---|---|

No. of Pages

எழுதப்பட்ட பக்கங்கள்

591-1324-24506409



11

Date of Examination :

தேர்வு நாள்

13/11/24

Subject Name :

படத்தின் பெயர்

Digital logic design.

| A | B | Y |
|---|---|---|
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |

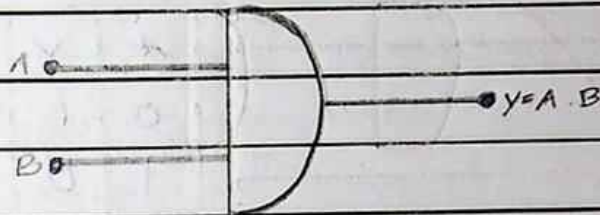
**தேர்வாளர்களுக்கான அறிவுரைகள்**  
**INSTRUCTIONS TO CANDIDATES**

1. விடைத்தாள் மாற்றிப் பெறுவதற்கு.  
Get the answer book replaced, if
  - விடைத்தாள் சரியாக சேர்ந்து பின் செய்யப்படாமல் இருந்தால்.
  - it is not stapled properly
  - விடைத்தாள் புத்தகப் பக்கங்களின் வரிசை எண் விடுபட்டிருந்தாலோ அல்லது வரிசையாக இல்லாமலிருந்தாலோ (மொத்தம் 30 பக்கங்கள்).
  - the page numbers are missing or not in order (there shall be 30 pages continuously numbered)
  - தலைப்பு பக்கத்தில் விடைத்தாள் புத்தகத்தின் கீழ்பகுதியில் வரிசை எண் அச்சிடப்படாமலிருந்தால்.
  - the serial number of the answer book is not printed at the bottom of the title page
2. உங்களுடைய பதிவு எண்ணையும், பெயரையும் அதற்காக கொடுக்கப்பட்டுள்ள தலைப்பு பக்கத்தின் கீழ்பகுதியில் மட்டும் எழுதவும்; அதைத் தவிர்த்து பதிவு எண், பெயர் ஆகியவற்றை விடைத்தாளில் மற்றப் பக்கங்களில் எழுதக்கூடாது. எந்தவிதமான அடையாளக் குறியீட்டையும் விடைத்தாளில் எழுதக்கூடாது.  
You are prohibited from writing your REGISTER NUMBER or NAME in any part of the answer book, other than the space provided at the bottom of the title page. You are prohibited from writing or leaving any distinguishing marks so as to identify your answer book.
3. தலைப்புப் பக்கத்தில் கொடுக்கப்பட்டுள்ள அதற்குரிய கட்டங்களில் விவரங்களை எழுதவும்.  
Fill up all the particulars, in the relevant boxes, in the title page.
4. கேள்விகளுக்கு பதில் எழுதும் போது விடைத்தாளில் இரண்டு பக்கங்களையும் பயன்படுத்த வேண்டும். பக்கங்களில் தொடர்ந்து விடை எழுதாமல் வெற்றிடம் விடக் கூடாது.  
Use both sides of the paper for answering questions, without leaving spaces/ lines in between.
5. இந்த விடைத்தாள் புத்தகம் போதுமான பக்கங்களை கொண்டிருக்கிறது. இதைத் தவிர கூடுதல் விடைத்தாள் அளிக்கப்படமாட்டாது.  
This answer book contains sufficient pages and no additional sheets will be issued.
6. கேள்விக்கு விடையளிக்கும் முன்பு வினாத்தாள் எண், வருடம், மாதம், காலம் இவைகளை சரிபார்க்கவும்.  
Check the Code Number, Month and year of Examination, Duration etc., in the question paper before answering the questions.
7. கொடுக்கப்பட்டுள்ள வரைப்படத்தாள் / கிராப் ஷீட் தவிர வேறு எந்த விடைத்தாளையும் சேர்க்க கூடாது. விடைத்தாள் புத்தகத்திலிருந்து எந்த பக்கத்தையும் கிழிக்கக் கூடாது.  
No extra sheet is to be attached except the drawing/graph sheets supplied and no sheet is to be teared from the answer book.
8. கைபேசி, துண்டுக் காகிதம் மற்றும் தடை செய்யப்பட்ட இதர பொருட்கள் வைத்திருத்தல், தேர்வுக்கு எதிரான முறைகேடுகளில் ஈடுபடுதல் அனைத்தும் தேர்வு வாரிய விதிகளின்படி தண்டனைக்குரிய குற்றமாகும்.  
POSSESSION OF ANY PROHIBITED MATERIAL, CELL PHONE, BITS OF PAPERS, etc., AND INVOLVEMENT IN MALPRACTICE OF ANY NATURE SHALL BE PUNISHABLE AS PER BOARD'S RULES.



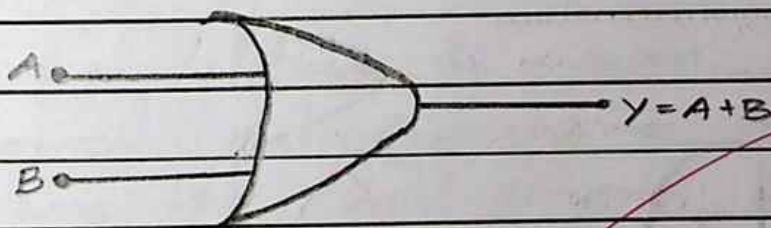
1. c) explain the AND, OR, NOT logic gates:

Ans) AND: Gate:



| A | B | Y |
|---|---|---|
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

OR: Gate:



| A | B | Y |
|---|---|---|
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |





2)

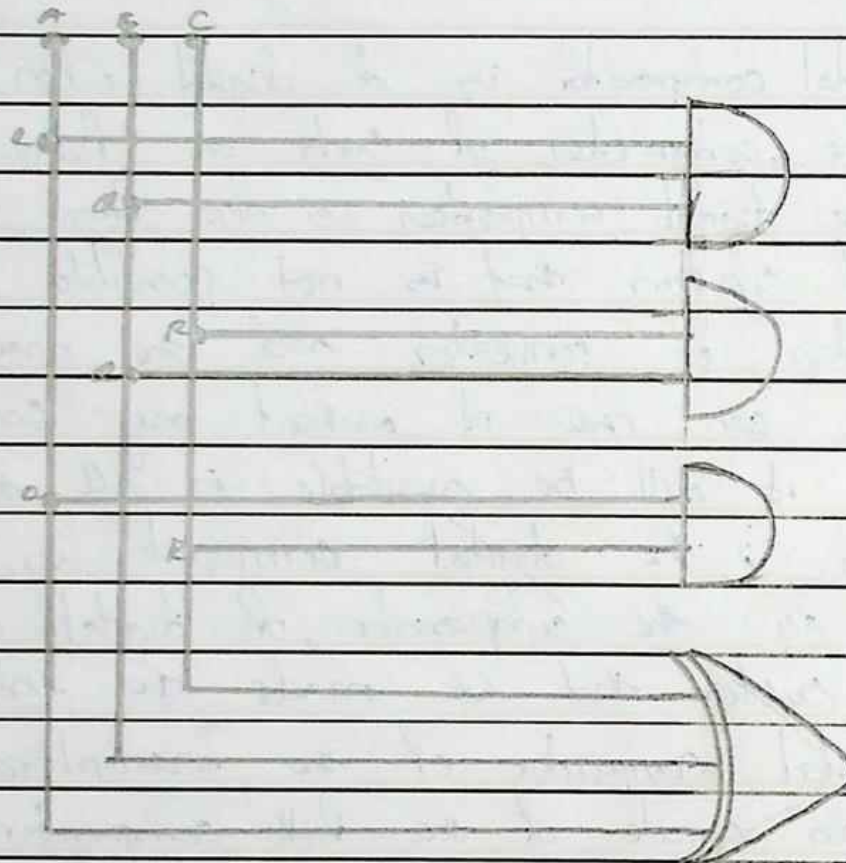
d) write a note on digital comparator.

A: The digital comparator is a digital when we use the comparison of such a following and the digital comparison is the first way of a digital system that is not possible for the comparison of converter and the main thing that we can use it without any security system it will be available in all the windows. The digital comparator is also known as the comparator of digital community of the system that we made the external. The digital comparator of the main principle is the main circuit of the full comparator of digital word that is a such digital also. The encode of the circuit that the difficult method of use the system that the way we explained that there is a big difference between the digital comparator and logic comparator. In the way of explain the comparator is the using method that all should follow the this is called comparator.



b) describe about full adder with its circuit diagram:

A:



| A | B | C | adder      |
|---|---|---|------------|
| 0 | 0 | 0 | no change  |
| 0 | 0 | 1 | change     |
| 0 | 1 | 0 | middle     |
| 1 | 1 | 1 | no change  |
| 1 | 0 | 1 | middle one |

The full adder is the adder of main the sub that made no unwanted things to all of us that be sure of the given

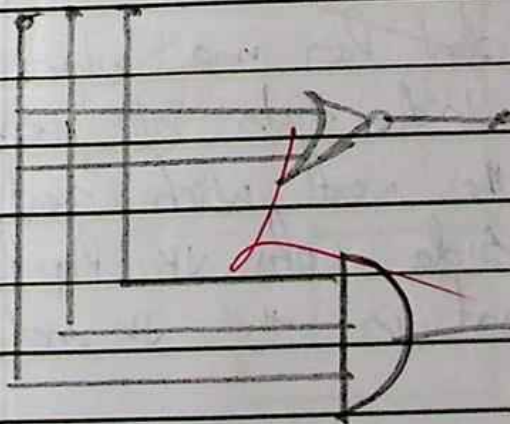


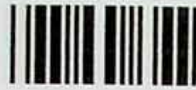
method that are proved because if the full adder and one more full adder that is the reason behind the success full career if the life so please help me in a full adder subtraction of this diagram. that is full adder:

c) explain encoder with its circuit diagram:

A:) the encoder is the main of the system that we logical proved the encoder of such a had illusion of the manufacturing method that have so many logic difference. it is used to give a main example for that purpose which needed to allow all link compressor edge.

diagram:





3) d) write a ~~note~~ note on JK and D Flip flop:

1:) the JK Flip flop and D Flip flop is the 2 sides of our concept that we used to different types which means the logical flip and its content.

there is a big atoms because there are 2 more side of a minute logical flip there so many other which is used to any other use more of this

this ~~flip~~ flip flop is the main 2 that are JK and D both are exact same but little difference of

the usage the main thing that happened in my life was yesterday I was very ~~exactly~~ nothing on a ~~little~~ big failure in the word I can't say

like that so the JK flip flop are the main use

of the JK flip flop and D flip flop is the equivalent binary of the system of others

if you ~~say~~ ~~reasons~~ ~~because~~ ~~is going to~~ the last time I saw my ~~goal~~ is in I can't watch it

it will be a big deal for me when I was kid I always be a kid that's all I don't know

how to explore the word which that

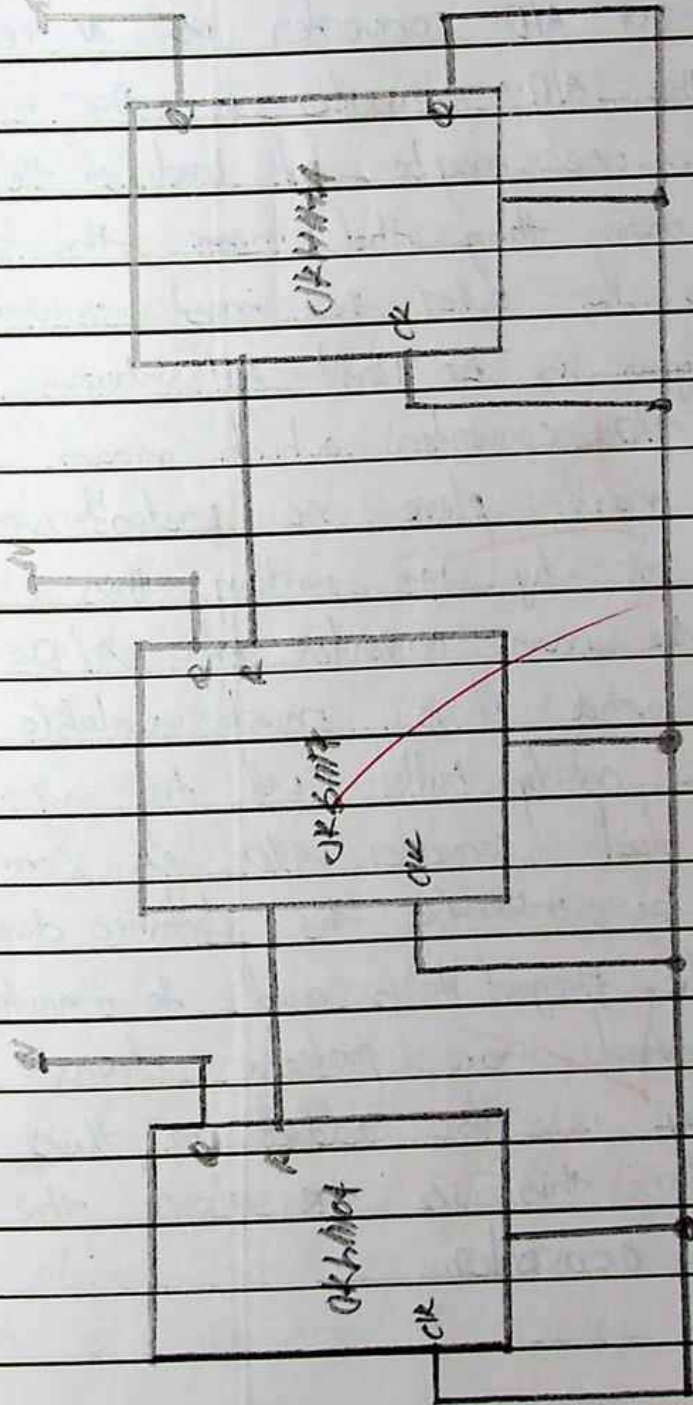
so the both side of JK flip flop are explained so that is the JK and D

flip flop:



b) describe about the concept of edge triggering serial to serial converter and serial to parallel converter?

A:





4:

b) write about the dual slope A/D converter:

A: the dual slope of A/D converter is a resistor of slope and the A/D converter is the main converter which use maybe at last of the year ending the main thing that means the beloved person abiding us for other the most unwanted movies of the year is ~~so~~ I can't tell because I don't know as A/D converter which means please give me mark please so I don't want more supply that is why I am writing this all bullshit so the main converter of A/D is dual slope and it is most valuable this I don't know actually bull I will try my best. so the slope of dual converter A/D is converted any time it can be miserable this electronic device. when we drop the project it is used to maintain the content it ~~short~~ more protective device. Architecture memory is also added in this A/D dual converter. this is ~~the~~ about the dual slope A/D converter.



d) write a note on relay and motor?

A: The relay and motor the motor is an electric device is to use most of device the motor is the main thing in every electric device which means if a fan want to work must be a motor there are so many in the in the very important thing is motor it can't be avoid which means the importance shows. the main thing of motor is easy to find the connections and damages. not only that more advantage are there but I can't remember now the is ~~the~~ called motor:

and the relay is the think that we all say if we see a not working substance we all say the it's the relay problem. but we don't know what is relay rather relay is the main thing that we couldn't miss the relay in each and every corner there is relay that show how important is that to every electronic things. that is the main ~~content~~ we all know that.

so please give me makes for this answers.  
this is ~~the~~ about the relay and motor.



5.

a) discuss about the classification of read only memory (ROM).

A: the read only memory is the memory that can only read there are so many ~~from~~ these programmable memory, erasable programmable memory, electrical erasable memory, there are so many the programmable memory is it can be programmed due to the word of the memory but in the erasable program it can be erase program you can erase program once you had any mistake. and there is no other thing it is called erasable programmable memory. and electrical erasable memory means it will be erased while using any other codes or anything it will be erase easily ~~other~~ than other memory the electrical erasable memory is it can be erase easily because its electrical erasable. this is EEPROM: there are so many read only memory that for better uses of storage devices. and the read only memory is 6 types and it could be easy to use for all and this ~~the~~ is the classifications of read only memory.



b) describe about the operations of pen drive and solid state hard drive:

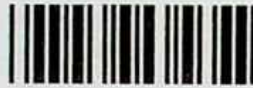
4: the pen drive is a external storage devices that can easy use it if you want to store any document or any photos or videos it can be store on pen drive & that very easy it can be insert on laptop directly or if you want to insert on your phone it is also easy you use ~~usb~~ cable for insert ~~on~~ pen drive easily there are ~~so~~ many use of these pen drive if your phone storage is full you can easily convert ~~data~~ all data's to pendrive. it is secondary storage device for all who use laptop or phone.

The solid state hard drive is a drive that can prevent your all ~~hard~~ files to this drive it would be very easy to use the drive. ~~sshd~~ is the common storage device.

it is also a secondary storage ~~device~~ and the main thing is solid state hard drive is easy to carry.

so this is called solid state hard drive.

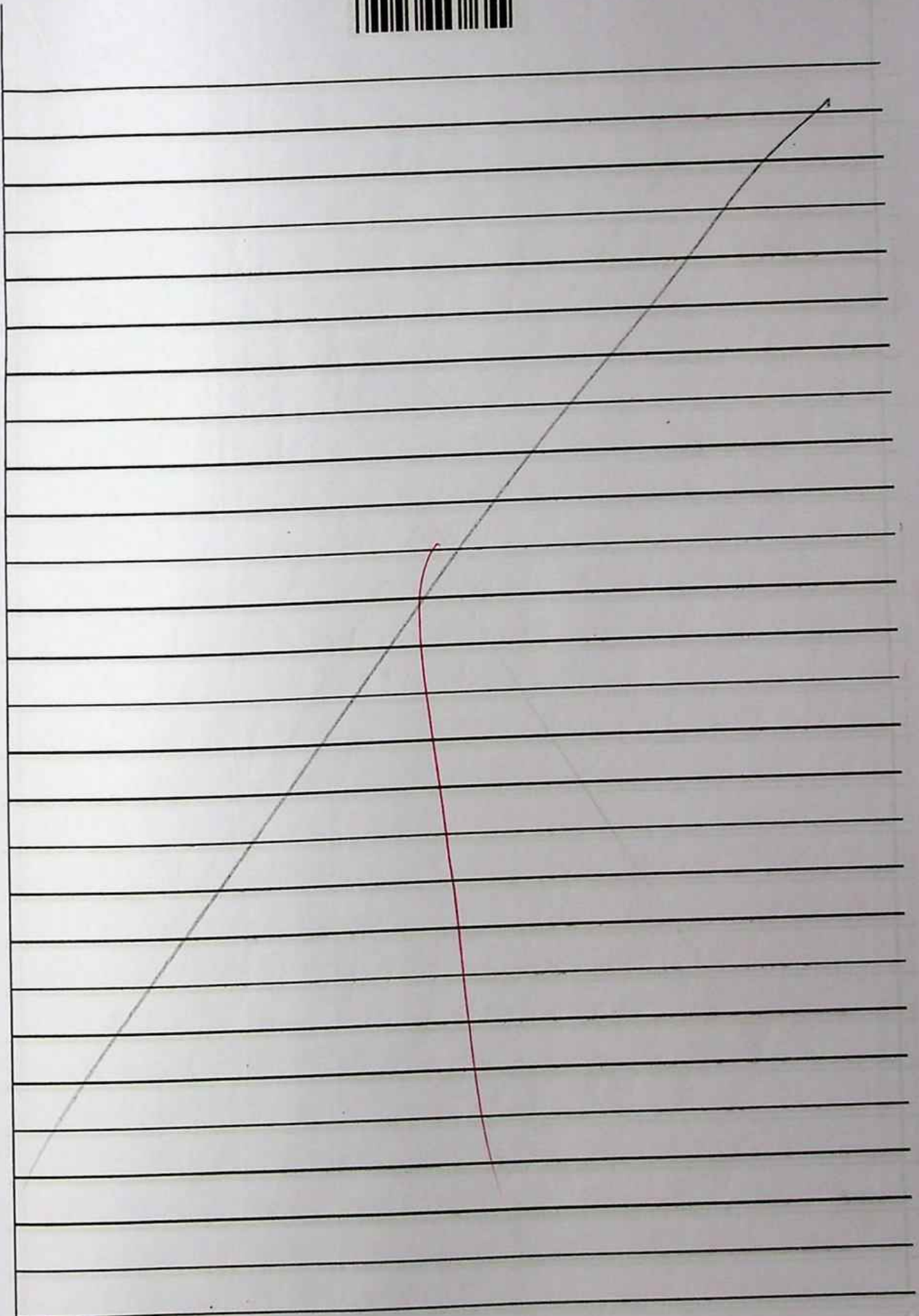
and pen drive:

**CERTIFICATE**

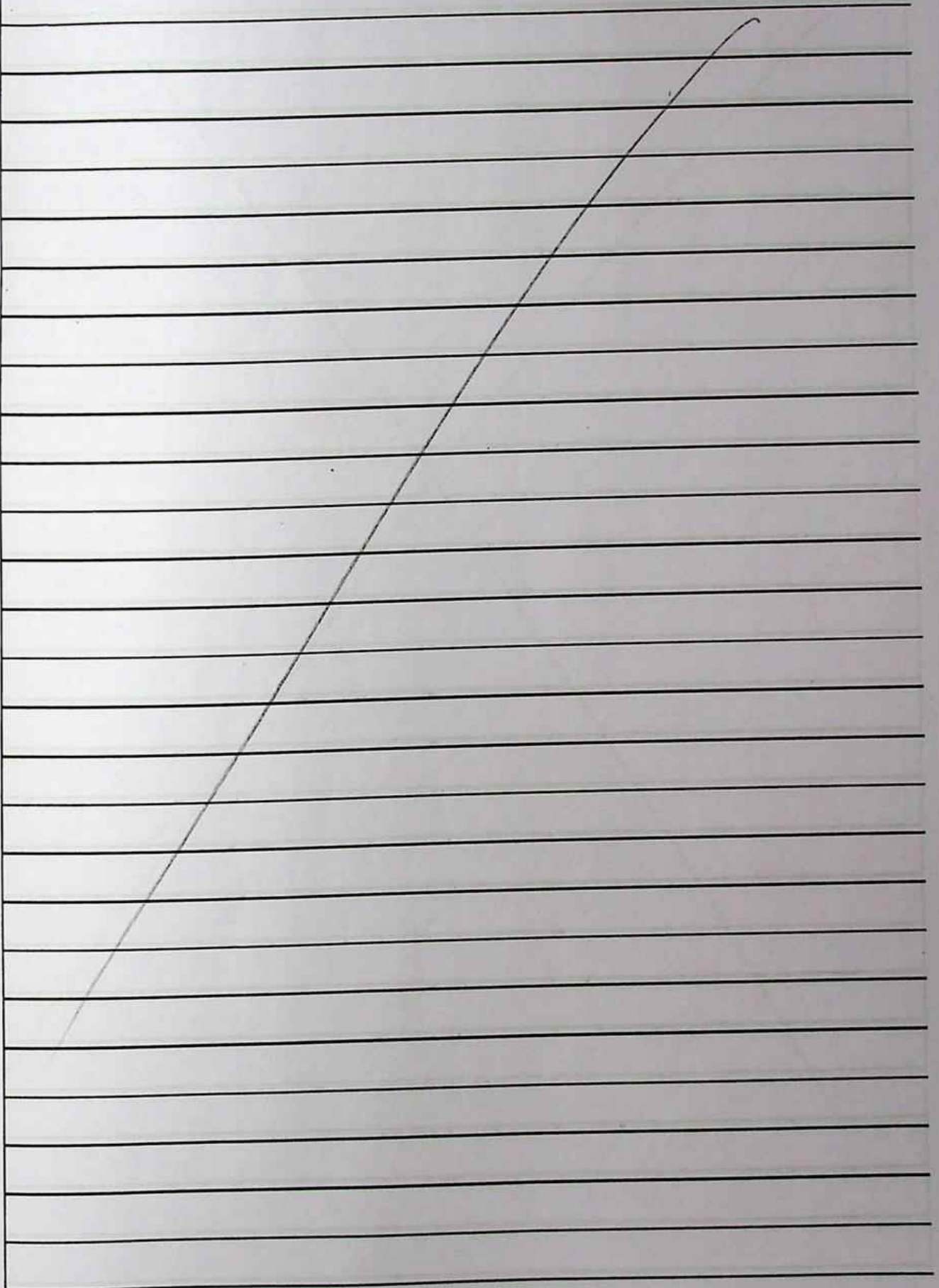
It is certified that the answer book  
contains .....11..... number of pages written  
by the student and all the blank portions  
have been struck off.

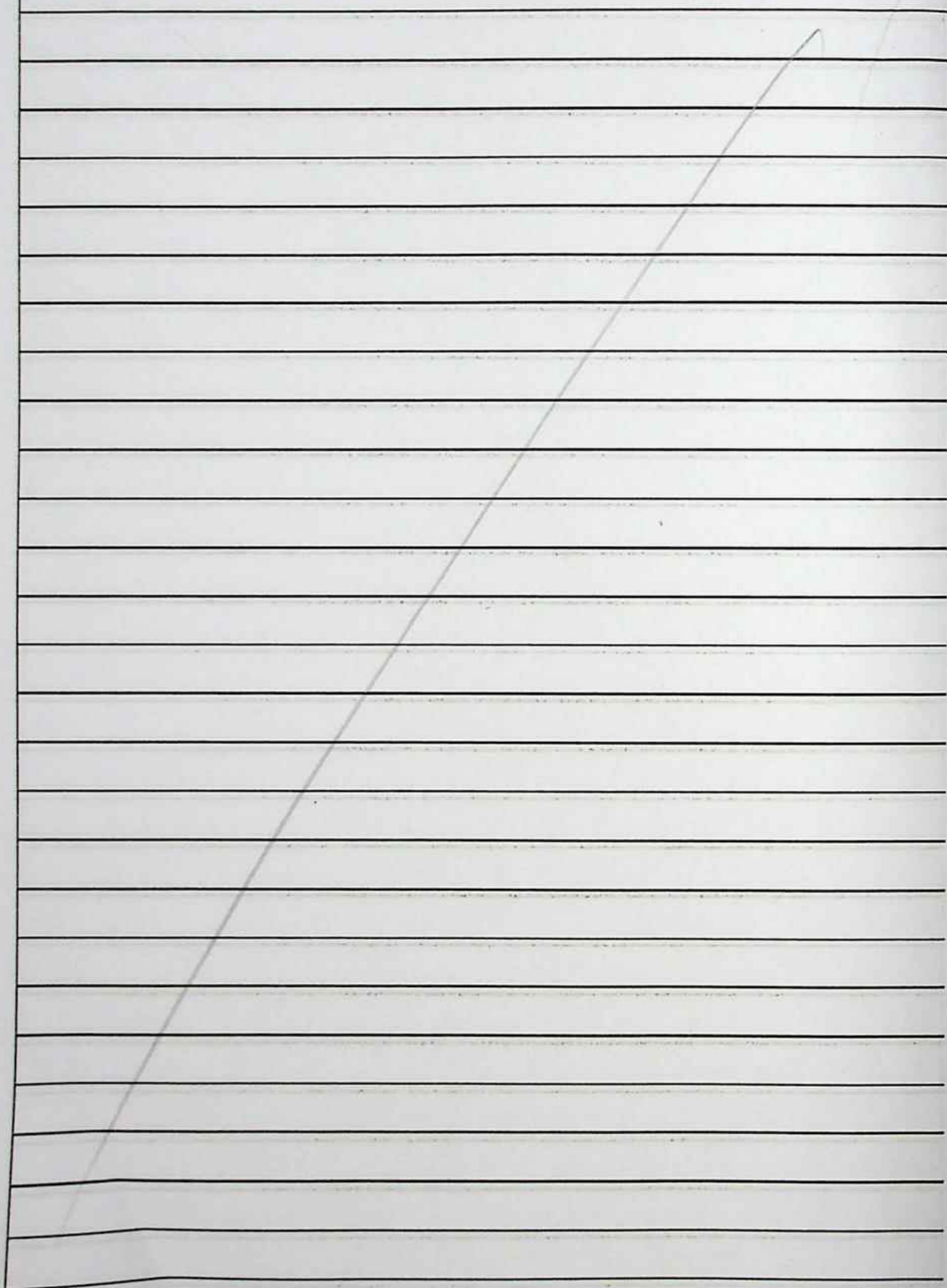
*Handwritten signature and date 12/10/2020*

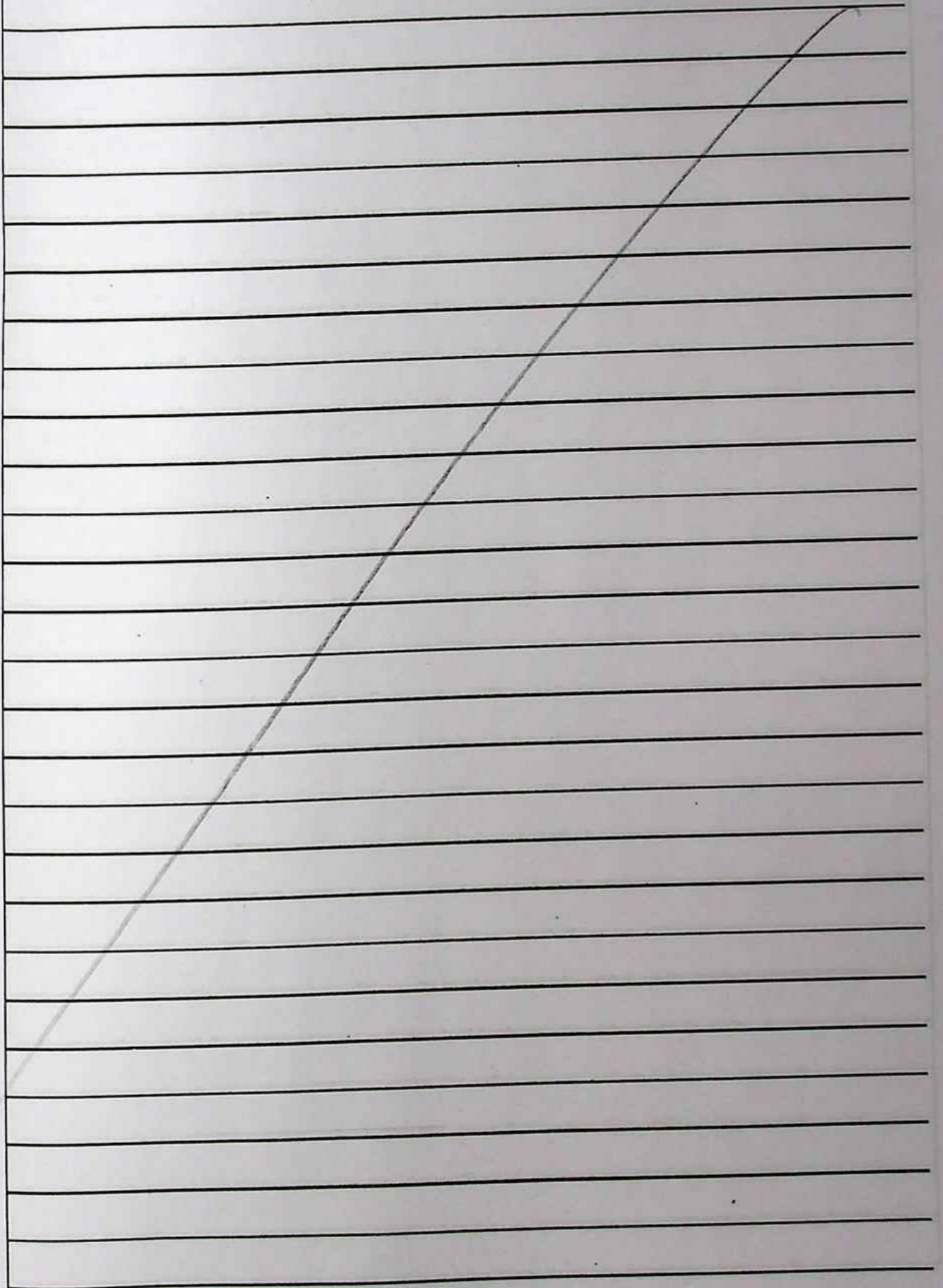
**Chief Coordinator**  
212, Nachimuthu Polytechnic  
College, Pollachi - 3













This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. At the top center, there is a small black barcode. The paper appears to be from a notebook or a set of loose-leaf papers.



This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. At the top center, there is a small black barcode. The paper appears to be from a notebook or a set of loose-leaf papers. There is no handwriting or other markings on the page.This image shows a single sheet of white paper with horizontal black ruling lines. The lines are evenly spaced and run across the width of the page. At the top center, there is a small, rectangular barcode sticker. The paper appears to be slightly aged or off-white. There is no handwriting or other markings on the page.









This image shows a single page of white paper with horizontal blue or grey ruling lines. At the top center, there is a black barcode. In the top right corner, the number "25" is printed. The rest of the page is blank, with no handwriting or other markings.









