higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

INFORMATION PROCESSING N4

(6020254)

17 May 2021 (X-paper)
09:00–12:00

This question paper consists of 18 pages.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
INFORMATION PROCESSING N4
TIME: 3 HOURS
MARKS: 300

INSTRUCTIONS TO CANDIDATES AND INVIGILATORS

CANDIDATES ARE ALLOWED 30 MINUTES TO READ THE INSTRUCTIONS

	TIME	MARKS
TYPING TECHNIQUE: SECTION A	**2 hours**	**200**
WORD PROCESSING: SECTION B	**1 hour**	**100**
TOTAL	**3 hours**	**300**

READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE ANSWERING THE PAPER. INVIGILATORS WILL EXPLAIN IF NECESSARY.

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SECTION A: TYPING TECHNIQUE

1. Candidates who arrive late and/or are not ready and on time for the timed accuracy test (QUESTION 1) will only be allowed to enter the examination venue after the TEN minutes allowed for the timed accuracy test have expired.

2. Candidates are allowed THREE minutes to read through the timed accuracy test before the commencement of the examination.

3. The timed accuracy test must be keyed in at the beginning of the examination.

4. After the TEN minutes allowed for the timed accuracy test have expired, your test will be collected and signed by the invigilator. The test will be retained by the invigilator until the completion of the examination session whereafter, in your presence, it will be placed in your EXAMINATION FOLDER.

5. Answer all the questions.

6. Retrieve the letterhead saved as QUESTION 3 on your diskette/hard drive to answer QUESTION 3.

7. Procedure for QUESTIONS 2, 3, 4 and 5: key in, save, print and place the PRINTOUT in your EXAMINATION FOLDER.

8. Each answer must be printed on a separate A4 page. Use only ONE side of the paper.

WORD PROCESSING: SECTION B

1. Answer all the questions.

2. Retrieve Q6A that is saved on your diskette/hard drive and process according to the instructions given in QUESTION 6B.

3. Procedure for QUESTIONS 7A and 8A: key in, save, print and place the PRINTOUT in your EXAMINATION FOLDER.

4. Retrieve, copy and process according to the instructions in part B of each question. Print and hand in part A as well as part B.

5. Each answer must be printed on a separate A4 page. Use only ONE side of the paper.

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GENERAL

1. You may use the ASCII codes.

2. No notes or any non-permissible material may be hidden in or transcribed into these articles.

3. Use only Courier New 12 pt unless indicated differently in the question paper.

4. Work fast in order to complete the question paper in time.

5. Save your work at regular intervals to prevent loss of keyed-in data during a power failure. Only the duration of the power failure will be allowed additionally – no extra time will be allowed to redo lost work.

6. In the event of a computer or printer defect the invigilator will make the necessary arrangements for you to continue with the examination and the actual time lost will be allowed additionally.

7. Key in the QUESTION NUMBER as well as your EXAMINATION NUMBER in each question as indicated in the instructions. No questions without printed EXAMINATION NUMBERS will be marked.

8. At the end of the examination session, hand in the following:

    8.1 EXAMINATION FOLDER with PRINTOUTS to be marked in the same order as the questions in the question paper.

    8.2 The compact disk/memory stick on which your work was saved, properly marked with your EXAMINATION NUMBER. If work is saved on the hard drive/network, the invigilator(s) must copy the work to a compact disk/memory stick and then delete the work from the hard drive/network immediately. Candidates' answers must be kept for at least SIX months.

    8.3 All other PRINTOUTS must be handed in. No PRINTOUTS may be taken out of the examination room or placed in the waste paper bins.

9. Any attempt to obtain information or to give information to another candidate is a violation of the examination rules and will be regarded in a serious light. If you are found guilty of such a violation, steps will be taken against you.

WAIT FOR THE INVIGILATOR'S INSTRUCTION BEFORE YOU TURN THE PAGE.

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SECTION A

TYPING TECHNIQUE

DO NOT TURN THE PAGE BEFORE THE INVIGILATOR INSTRUCTS YOU TO DO SO.

	TIME	MARKS
QUESTION 1: TIMED ACCURACY TEST	10 minutes	20
QUESTION 2: TABULAR STATEMENT	27 minutes	44
QUESTION 3: OFFICIAL LETTER	37 minutes	60
QUESTION 4: PARAGRAPHS	34 minutes	56
QUESTION 5: AFRICAN LANGUAGE	12 minutes	20
TOTAL	120 minutes	200

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QUESTION 1: TIMED ACCURACY TEST

TIME: 10 MINUTES **MARKS: 20**

MARGINS: Left: 2,54 cm/1" Right: 2,54 cm/1" SPEED: 35 wpm (minimum requirement) FONT: Courier New 12 pt	PAPER: A4 portrait HYPHENATION: None ALIGNMENT: Left LINE SPACING: 2,0 (double)
1. The following timed accuracy test must be keyed in once only. 2. The passage allows for speeds of 35 and 40 words per minute. 3. Key in your EXAMINATION NUMBER left-aligned, QUESTION 1 and your STATION/ COMPUTER NUMBER right-aligned as a header. 4. Save the document as Q1 and make a PRINTOUT. 5. After completion the timed accuracy test must be collected and signed by the invigilator. All pages need to be signed.	

The fourth industrial revolution heralds a series of social, political, cultural and economic upheavals that will unfold over the twenty-first century. Building on the widespread availability of digital technologies that were the result of the third industrial or digital revolution, the fourth industrial revolution will be driven largely by the convergence of digital, biological and physical innovations.

Like the first industrial revolution, which lead to steam-powered factories, the second industrial revolution, which had to do with mass production and manufacturing, and the third industrial revolution was the beginning of the digitisation, the fourth industrial revolution technologies has to do with artificial intelligence, genome editing, augmented reality, robotics and three-D printing are rapidly changing the way humans create, exchange and distribute value.

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QUESTION 1 (CONTINUED)

As occurred in the previous revolutions, this will profoundly transform institutions, industries and individuals. More importantly, this revolution will be guided by the choices that people make today. The world in fifty to hundred years from now will owe a lot of its character to how we think about investing in and deploying these powerful new technologies.

It is important to appreciate that the fourth industrial revolution involves a systemic change across many sectors and aspects of human life. The crosscutting impacts of emerging technologies are even more important than the exciting capabilities they represent. The result of all this is societal transformation on a global scale. By affecting the incentives, rules and norms of economic life, it transforms how we communicate, learn, entertain ourselves and relate to one another and how we understand ourselves as human beings. **35 wpm**

Furthermore, the sense that new technologies are being developed and implemented at an increasingly rapid pace has an impact on human identities, communities and political structures. As a result, our responsibilities **40 wpm**

[20]

QUESTION 2: TABULAR STATEMENT

TIME: 27 MINUTES **MARKS: 44**

MARGINS: Left: 1,27 cm/0,5" Right: 1,27 cm/0,5" FONT: Courier New 12 pt	PAPER: A4 landscape ALIGNMENT: Left LINE SPACING: 1,0 (except where indicated differently)

1. Key in your EXAMINATION NUMBER left-aligned, QUESTION 2 and your STATION/ COMPUTER NUMBER right-aligned as a header.
2. Take all proofreading signs into consideration.
3. Key in as indicated.
4. Right-align all figures.
5. Save the document as Q2 and make a PRINTOUT.
6. Place the PRINTOUT in your EXAMINATION FOLDER.

The fourth Industrial Revolution is in full swing replace with 4th uc, bold, centre
╪ sp
Hiring managers forecee tech-driven workforce transformation uc, ital
╪

Already [transformed NL uc	Actively NL uc [transforming		Will transform NL uc [within five years		Sum of all [transforming NL uc in figures	
Cyber security	20%	44%	87%	82%	Big data processing	57%
Artificial intelligence	14%	24%	78%	83%	Artificial intelligence	99%
Internet of things	22%	25%	88%	84%	Internet of things	88%
Cloud computing	29%	27%	89%	85%	Robotics	77%
Voice-activated personal assistants	27% runs on	23%	90% trs	86%	3D printing	66%
Virtual/augmented reality runs on	15%	12%	91%	87%	Augmented reality	55%
Chartbots	25%	21%	92%	88%	Virtual reality	44%
Blockchain	28%	20%	93%	67%	Block chain	33%
Crypto currencies	20%	29%	94%	77%	Crypto currencies	22%

╪ in words ~~trust~~ stet
% of customers and hiring managers who ~~believe~~ / following technologies.

[44]

QUESTION 3: OFFICIAL LETTER

TIME: 37 MINUTES **MARKS**: **60**

MARGINS: Left: 3,81 cm/1,5" Right: 2,54 cm/1" FONT: Courier New 12 pt	PAPER: Letterhead HYPHENATION: Automatic ALIGNMENT: Left LINE SPACING: 1,0 with double line spacing between paragraphs
1. Retrieve the letterhead, QUESTION 3 that is saved on your diskette/hard drive. 2. Key in your EXAMINATION NUMBER left-aligned as a footer. 3. Take all proofreading signs into consideration. 4. Save the document as Q3 and make a PRINTOUT. 5. Place the PRINTOUT in your EXAMINATION FOLDER.	

Today's date in descending order

Move

To: Minister of public enterprises, Minister of finance } display correctly

Circular number 28 of 20.. sp caps use current year

5 problems with / 4th industrial revolution uc, bold in full

uc, bold uc, ital NP sp

2. Problem 2: A revolutionary view of history [Academics, especialy historians and geographers, have long argued as to whether human society changes in an evolutionary or a revolutionary way. There have thus been numerous debates as to how many agricultural revolutions there were that preceded or were associated with / so-called first industrial revolution.

uc, bold uc, ital NP

1. Problem 1: A belief that technology has changed and is changing / world [All so-called industrial revolutions are based on / fundamentally incorrect assumption that technology is changing / world.

uc, bold uc, ital NP 3 1 2 trs

4. Problem 4: Male heroes of / revolution [One of / most shocking striking and features of / Huawei video that prompted this critique was that almost all of / people illustrated as / heroes of / industrial revolutions were men.

uc, bold uc, ital NP ~~idea~~ stet

3. Problem 3: An elitist view of history [The ~~notion~~ of industrial revolutions is also largely an expression of an elitist view of history. It is about, and written by / elites who shape them and enable them. It is about / owners of / factories rather than / labourers, it is about innovative geniuses rather than / peasants labouring to produce food for them and it is about / wise politicians who see / potential of these technologies to transform / world in their own image.

uc, bold uc, ital NP

5. Problem 5: The Fourth Industrial Revolution as a self-fulfilling prophecy [Finally, / idea of a heroic male industrial revolution has ʌ promoted in large part as a self-fulfilling ʌ been prophecy.

Deputy Director uc, bold

Candidate:
1. **Arrange paragraphs in numerical order.**
2. **Indent content below headings.**
3. **Insert a page break after paragraph 3.**
4. **Number the second page as 2 top centred.**

[60]

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QUESTION 4: PARAGRAPHS

TIME: 34 MINUTES **MARKS: 56**

MARGINS: Left: 2,54 cm/1" Right: 2,54 cm/1" PAPER: A4 portrait ALIGNMENT: Left	HYPHENATION: Automatic LINE SPACING: 1,0 with double line spacing between paragraphs FONT: Courier New 12 pt unless where indicated differently

1. Key in your EXAMINATION NUMBER left-aligned, QUESTION 4 and your STATION/ COMPUTER NUMBER right-aligned as a header.
2. Take all proofreading signs into consideration.
3. Save the document as Q4 and make a PRINTOUT.
4. Place the PRINTOUT in your EXAMINATION FOLDER.

Move

/ world is seeing revolutionary advances in science & tech nology centre, uc, u/line join

What we did: three big ideas in figures uc, bold

1. Bottom-up strategy development uc, ital ~~given~~ stet

[Firstly, we built a refreshed strategy up from input ~~received~~ across / firm & from our NP clients rather than from a set of top-down pronouncements. We asked our people what they thought via a set of surveys & face-to-face conversations.

2. Holistic measurement of contribution uc, ital trs

[Knowledgeable workers are specialists, but our clients have many across needs many NP different specialisations. Our clients are also often multinational: they need to be able to talk to people in many countries to solve their problems. However good / strategy is on paper, it will not succeed in a partnership environment if there is insufficient support for what is proposed.

3. Servant leadership uc, ital sp

[Knowledgeable workers are experts in their area of fokus & they are also NP highly#motivated. People like this don't need management to tell them what to do.

They need their leadership team to create a working environment that is supportive of achieving their ambitions. Arial 10 pt, right-align

3 ways to be a good leader in / Fourth Industrial Revolution Arial 14 pt, uc, bold, centre

Symbol = Wingdings

= letter space

Candidate:
Change [&] to [and].

[56]

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QUESTION 5: AFRICAN LANGUAGE

TIME: 12 MINUTES **MARKS: 20**

MARGINS: Left: 2,54 cm/1" Right: 2,54 cm/1" FONT: Courier New 12 pt	PAPER: A4 portrait HYPHENATION: None ALIGNMENT: Left LINE SPACING: 1,5
1. Key in your EXAMINATION NUMBER left-aligned, QUESTION 5 and your STATION/ COMPUTER NUMBER right-aligned as a header. 2. Save the document as Q5 and make a PRINTOUT. 3. Place the PRINTOUT in your EXAMINATION FOLDER.	

Re dire eng go fedisa baporofeta le baruti ba maaka mo nageng ya rena? O kare rena ma Afurika borwa re golofetxe. Re nyaka mehlolo yeo eka fetolago lego kaonafatja seemo sa maphelo.

Nkane re dumela kudu mo go mehlolo le phediso ya mathata a rena ka tshoganetso? Gona go swarwa lebaka ke gore ba dira gore batho ba tshepe maaka ao a bona le motho o tseba bophelo bja gagwe go feta motho yo mongwe.

[20]

TOTAL SECTION A: 200

SECTION B

WORD PROCESSING

WORK FAST AND ACCURATELY

QUESTION 6:	**PARAGRAPHS**	**A** **B**	**Already keyed in** **15 minutes**	**00** **25**
QUESTION 7:	**MEMORANDUM**	**A** **B**	**10 minutes** **14 minutes**	**16** **23**
QUESTION 8:	**TABLES**	**A** **B**	**8 minutes** **13 minutes**	**14** **22**
TOTAL			**60 minutes**	**100**

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QUESTION 6B: PROCESSING

TIME: 15 MINUTES **MARKS: 25**

1.	Retrieve the document, Q6A, that is saved on your diskette/hard drive. Process according to the instructions and as indicated in the text.
2.	Change the left- and right-hand margins to 2,54 cm/1" and Courier New 12 pt.
3.	Align the document left and use the hyphenation function (Automatic).
4.	Change the line spacing to single-line spacing with double-line spacing between paragraphs and indent.
5.	Key in your EXAMINATION NUMBER left-aligned, QUESTION 6B and your STATION/ COMPUTER NUMBER right-aligned as a header.
6.	Save the document as Q6B and make a PRINTOUT.
7.	Put the PRINTOUT in your EXAMINATION COVER.

ʌ What is the Fourth Industrial Revolution? WordArt 18 pt, uc, bold
╪
uc, ital, centre
What exactly is the Fourth Industrial Revolution and why should you care? [The Fourth Industrial Revolution is a way of describing NP the blurring of boundaries between the physical, digital and biological worlds.
╪
ʌ 1. ╫ Where did the term Fourth Industrial Revolution come from? uc, ital
╪
del
✓╫ While the Fourth Industrial Revolution ~~(sometimes called the 4IR or Industry 4.0)~~ is set to change society like never before, it builds on foundations laid by the first three industrial revolutions. The advent of the steam engine in the 18th in words century led to the first industrial revolution allowing production to be mechanised for the first time and driving social change as people became increasingly urbanised.

ʌ 2. ╫ What are the technologies driving change? uc, ital
trs
✓╫ The way easiest to understand the Fourth Industrial Revolution is to focus on the technologies driving it. [These include NP uc the following:
ʌ[2.1 ╫ AI describes computers that can think like humans – recognising complex patterns, processing information, drawing conclusions and making recommendations. ʌ [2.2 ╫ Blockchain is a secure, decentralised and transparent way of recording shared data and many more.

ʌ 4. ╫ How will the Fourth Industrial Revolution affect the future of work? uc, ital

✓╫ Nowhere is the upheaval of the Fourth Industrial Revolution more likely to be felt than in the workplace. As with previous industrial revolutions, the Fourth Industrial Revolution will profoundly affect people's lives as AI and increased automation see many types of jobs disappear. At the same time entirely new categories of jobs are emerging.

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QUESTION 6B (CONTINUED)

Insert a page number top left as 2

ʌ 5. ╫ What should businesses do to improve their workforces? **uc, ital**

✓╫ Businesses will need to ensure that they have the right mix of skills in their workforce to keep pace with the changing technology. Another study shows that 59% of hiring managers believe that AI will impact the types of skills their companies need. Workers will, more than likely, need to update their skills not just once but many times throughout their careers. ʌ Many senior executives are already asking how all this will be achieved.

ʌ 6. ╫ How do we ensure that the Fourth Industrial Revolution is good for everyone? **uc, ital**

~~immense~~ **stet**

✓╫ With the Fourth Industrial Revolution presenting both ~~massive~~ opportunities and challenges, it is up to all of us to work together to ensure that it benefits everyone. [Humans must be **NP** proactive in shaping this technology and disruption. This requires global cooperation and a shared view of how technology is reshaping our economic, social, cultural and individual lives. [With **NP** businesses at the forefront of the Fourth Industrial Revolution driving both innovation and social disruption, they must also play a pivotal role in ensuring that the needs of all stakeholders are met and not just those of shareholders.

ʌ 3. ╫ How will the Fourth Industrial Revolution affect business? **uc, ital**

sp

✓╫ As these technologies change, it is posible that they are also transforming customers' expectations. A global survey from Sales Force Research shows that a majority of those believe that these technologies and the experiences they enable will transform their interactions with companies within five years. **in figures**

Candidate: 1. Paragraphs must be in numerical order.
2. Find [AI] and replace with Artificial Intelligence in capital letters and double underlined.
3. Change underlined [Fourth Industrial Revolution] to capital letters and bold.
4. Insert [✓] where it appears and indent.
5. Insert a page break after paragraph 3.

[25]

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QUESTION 7A: MEMORANDUM

TIME: 10 MINUTES **MARKS: 16**

MARGINS: Left: 2,54 cm/1" Right: 2,54 cm/1" FONT: Courier New 12 pt	PAPER: A4 portrait HYPHENATION: None ALIGNMENT: Left LINE SPACING: Double (2,0)
1. Key in your EXAMINATION NUMBER left-aligned, QUESTION 7A and your STATION/COMPUTER NUMBER right-aligned as a header. 2. Key in, save the document as Q7A and make a PRINTOUT. 3. Place the PRINTOUT in your EXAMINATION FOLDER.	

The Fourth Industrial Revolution is characterised by making systems as well as machines intelligent & connected. The underlying technologies of the Fourth Industrial Revolution include artificial intelligence (AI) as well as blockchain. Artificial Intelligence is a paradigm where pysical & social phenomena are programmed to solve complex problems. AI enables machines to learn, adapt, evolve & optimise and has had a profound impact in diverse fields such as engineering, medical sciences & social sciences.

(16)

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QUESTION 7B: PROCESSING

TIME: 14 MINUTES **MARKS: 23**

1. Retrieve the document saved as Q7A.
2. Process according to the instructions and as indicated in the text.
3. Change the line spacing to single-line spacing with double-line spacing between paragraphs.
4. Change QUESTION 7A in the header to QUESTION 7B.
5. Save the document as Q7B and make a PRINTOUT.
6. Place the PRINTOUT in your EXAMINATION COVER.

Memorandum sp caps, bold

To: University of Johannesburg
From: Prof. Tshilidzi Marwala
Date: Use today's date in descending order
uc, d/s

The Fourth Industrial Revolution uc, bold

The Fourth Industrial Revolution is characterised by making ~~manufacturing~~ stet in full ~~systems~~ as well as machines intelligent & connected. [The NP underlying technologies of the Fourth Industrial Revolution uc include artificial intelligence ~~(AI)~~ as well as blockchain. del [Artificial Intelligence is a paradigm where pysical & NP sp social phenomena are programmed to solve complex problems. AI enables machines to learn, adapt, evolve & optimise and has ~~had~~ a profound impact in diverse fields such as engineering, del medical sciences & social sciences.

- The implications of these on society as well as the underlying costs are also explored. CN 10 pt

For more information about the Fourth Industrial Revolution call 0860 99 88 55 or visit www.fourthindustrialrevolution.com. runs on CN 10 pt

Candidate: Find [AI] and replace with [Artificial Intelligence].

(23)
[39]

QUESTION 8A: TABLES

TIME: 8 MINUTES **MARKS: 14**

MARGINS: Left: 2,54 cm/1" Right: 2,54 cm/1" FONT: Arial 12 pt	PAPER: A4 portrait HYPHENATION: Automatic ALIGNMENT: Left LINE SPACING:1,0 (except where indicated differently)
1. Key in your EXAMINATION NUMBER left-aligned, QUESTION 8A and your STATION /COMPUTER NUMBER right-aligned as a header. 2. Key in, save the document as Q8A and make a PRINTOUT. 3. Place the PRINTOUT in your EXAMINATION FOLDER.	

The Network for Global Technology Governance

- How can we maximise the benefits of science and technology for society?
- We partner with governments, leading companies, civil society and experts from around the world to co-design and pilot innovative new approaches to policy and governance in the Fourth Industrial Revolution.
- We're not just developing new ideas – we're implementing them across the globe at the pace demanded by technological change.
- As a leader (expert or innovator) you may have great ideas for the Fourth Industrial Revolution governance.
- From intelligence to artificial precision medicine, we aim to unlock the potential of cutting-edge technologies to transform society.

(14)

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QUESTION 8B: PROCESSING

TIME: 13 MINUTES **MARKS: 22**

1. Retrieve the document saved as Q8A.
2. Process according to the instructions and as indicated in the text.
3. Insert tables as indicated.
4. Change margins to 1,27 cm/0,5".
5. Change QUESTION 8A in the header to QUESTION 8B.
6. Save the document as Q8B and make a PRINTOUT.
7. Place the PRINTOUT in your EXAMINATION COVER.

ʎ Centre for the Fourth Industrial Revolution **Arial 16 pt, uc, bold, centre**

ǂ

The Network for Global Technology Governance **uc**

ǂ **Candidate: delete bullets**

Column 2	**Column 1**
ʎ Real world impact at the speed of now **uc** ǂ • We're not just developing new ideas – we're implementing them across the globe at the pace demanded by technological change. ǂ ʎ Our approach **uc** ǂ **double u/line** • As a leader (expert or innovator) you may have great ideas for the Fourth Industrial Revolution governance. ʎ **[**But you can't make global change alone. **NP** ǂ ʎ The most daunting challenges of our generation **uc** ǂ 3 2 1 **trs** • From intelligence to artificial precision medicine we aim to unlock the potential of cutting-edge technologies to transform society.	ʎ Our portfolios **uc** ǂ • How can we maximise the benefits of science and technology for society? ǂ ʎ That's our mission uc ǂ ~~administration~~ **stet** • We partner with ~~governments~~, leading companies, civil society and experts from around the world to co-design and pilot innovative new approaches to policy and governance in the Fourth Industrial Revolution. **bold** ǂ ʎ Brochure: Centre for the Fourth Industrial Revolution **uc** ǂ ʎ The forum's centre for the Fourth Industrial Revolution is a newly established focal point within the international community for multi stakeholder dialogue.

Candidate: Insert a page border of your choice

(22)
[36]

TOTAL SECTION B: 100
GRAND TOTAL: 300

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