



Semester 1 Assessment, 2021

School of Mathematics and Statistics

## MAST30025 Linear Statistical Models

Reading time: 30 minutes — Writing time: 3 hours — Upload time: 30 minutes

This exam consists of 23 pages (including this page)

### Permitted Materials

- This exam and/or an offline electronic PDF reader, one or more copies of the masked exam template made available earlier, blank loose-leaf paper and a Casio FX-82 calculator.
- One double sided A4 page of notes (handwritten only).

### Instructions to Students

- If you have a printer, print the exam one-sided. If you cannot print, download the exam to a second device and disconnect that device from the internet.
- Ask the supervisor if you want to use the device running Zoom.
- Check your scanned PDF before submitting.
- You must submit while in the Zoom room and no submissions will be accepted after you have left the Zoom room.

### Writing

- There are 7 questions with marks as shown. The total number of marks available is 90.
- Write your answers in the boxes provided on the exam that you have printed or the masked exam template that has been previously made available. If you need more space, you can use blank paper. Note this in the answer box, so the marker knows. The extra pages can be added to the end of the exam to scan.
- If you have been unable to print the exam and do not have the masked template write your answers on A4 paper. The first page should contain only your student number, the subject code and the subject name. Write on one side of each sheet only. Start each question on a new page and include the question number at the top of each page.

### Scanning

- Put the pages in number order and the correct way up. Add any extra pages to the end. Use a scanning app to scan all pages to PDF. Scan directly from above. Crop pages to A4. Check PDF is readable.

### Submitting

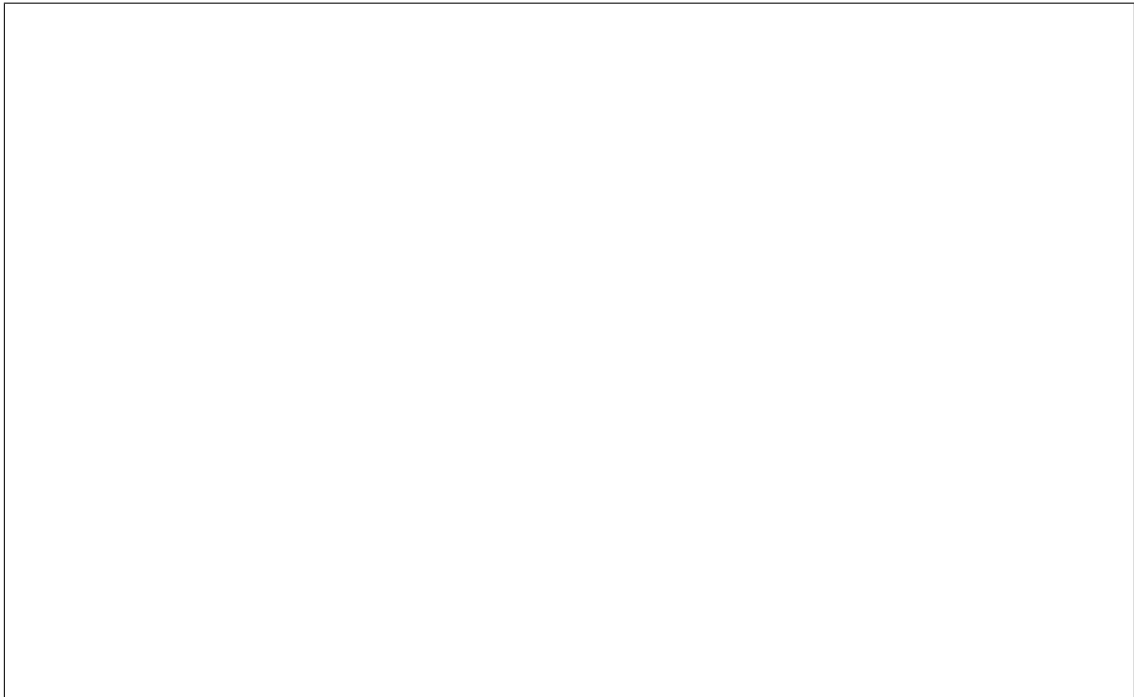
- **You must submit while in the Zoom room.** No submissions will be accepted after you have left the Zoom room.
- Go to the Gradescope window. Choose the Canvas assignment for this exam. Submit your file as a single PDF document only. Get Gradescope confirmation on email. Tell your supervisor it is submitted.

**Question 1 (10 marks)**

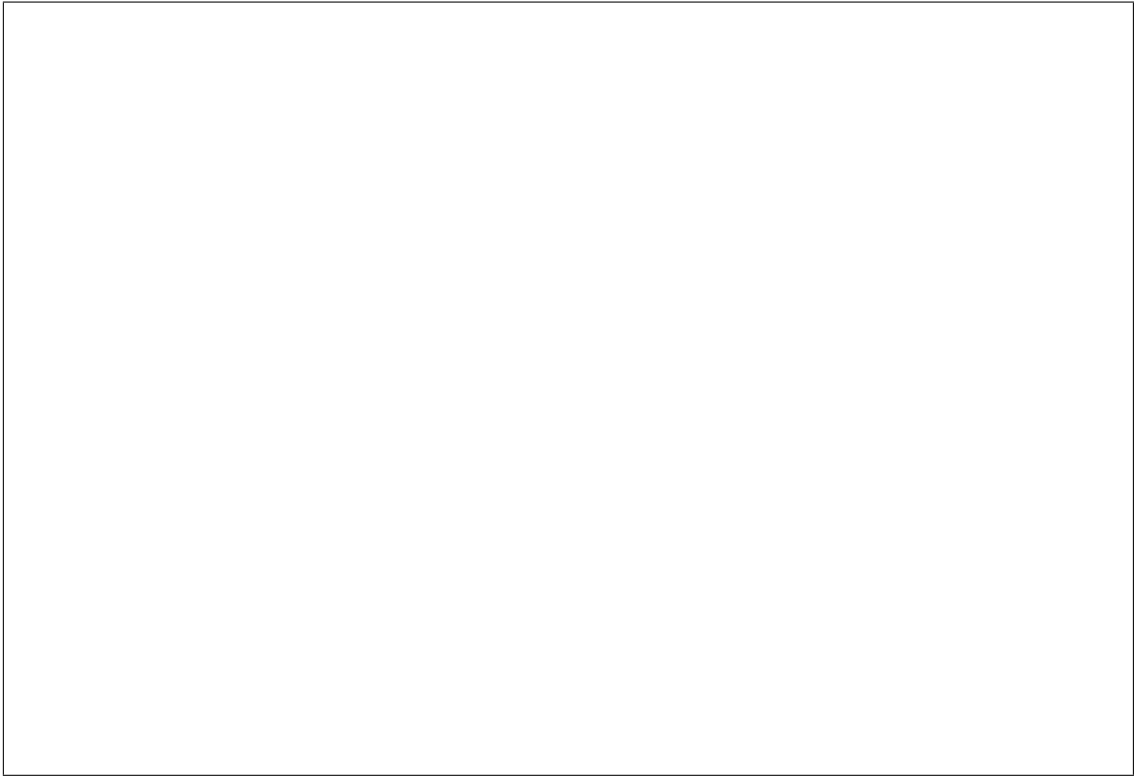
(a)



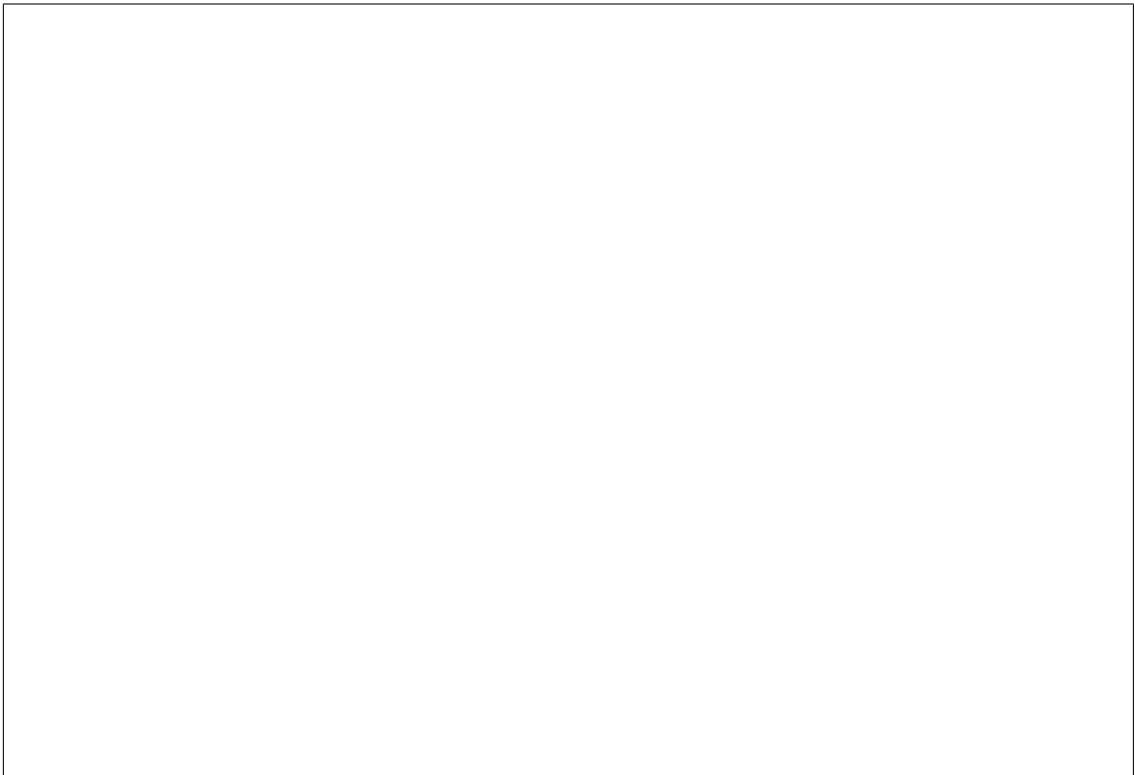
(b)



(c)



(d)

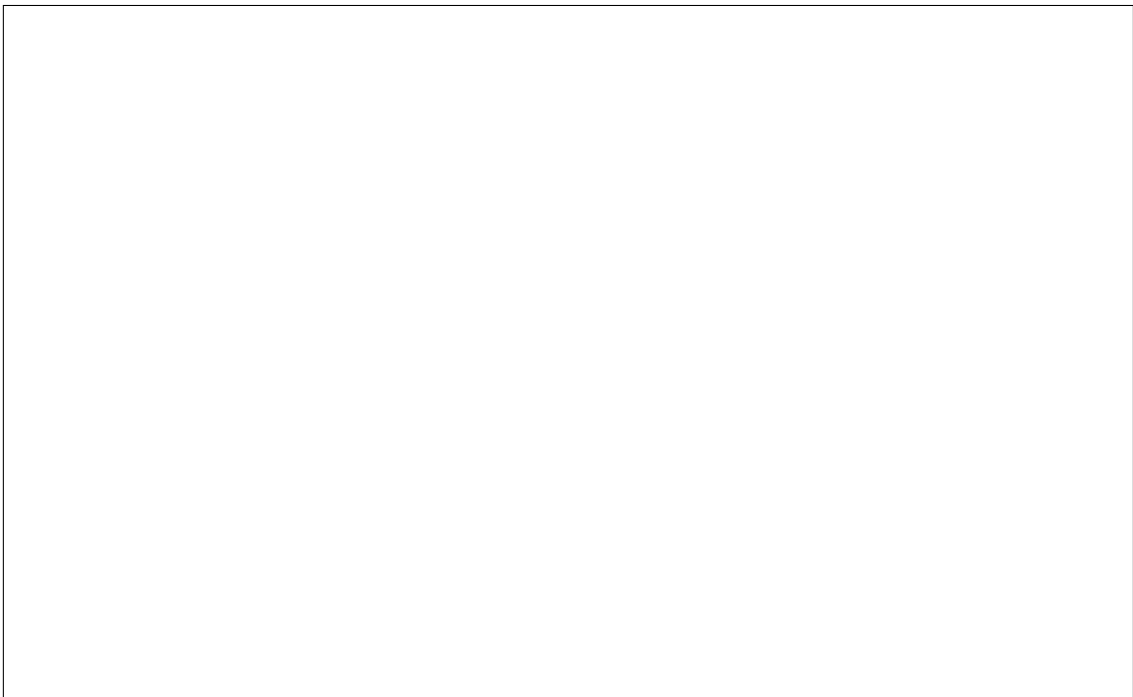


**Question 2 (13 marks)**

(a)



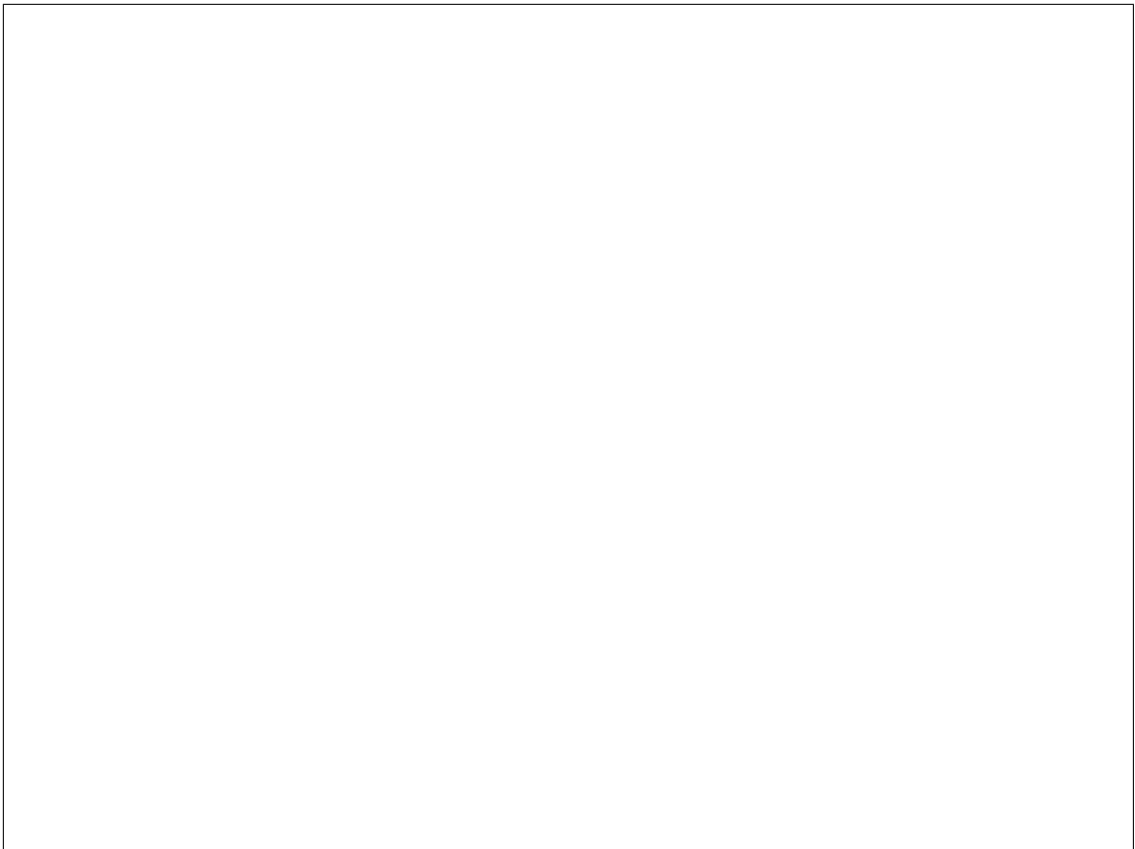
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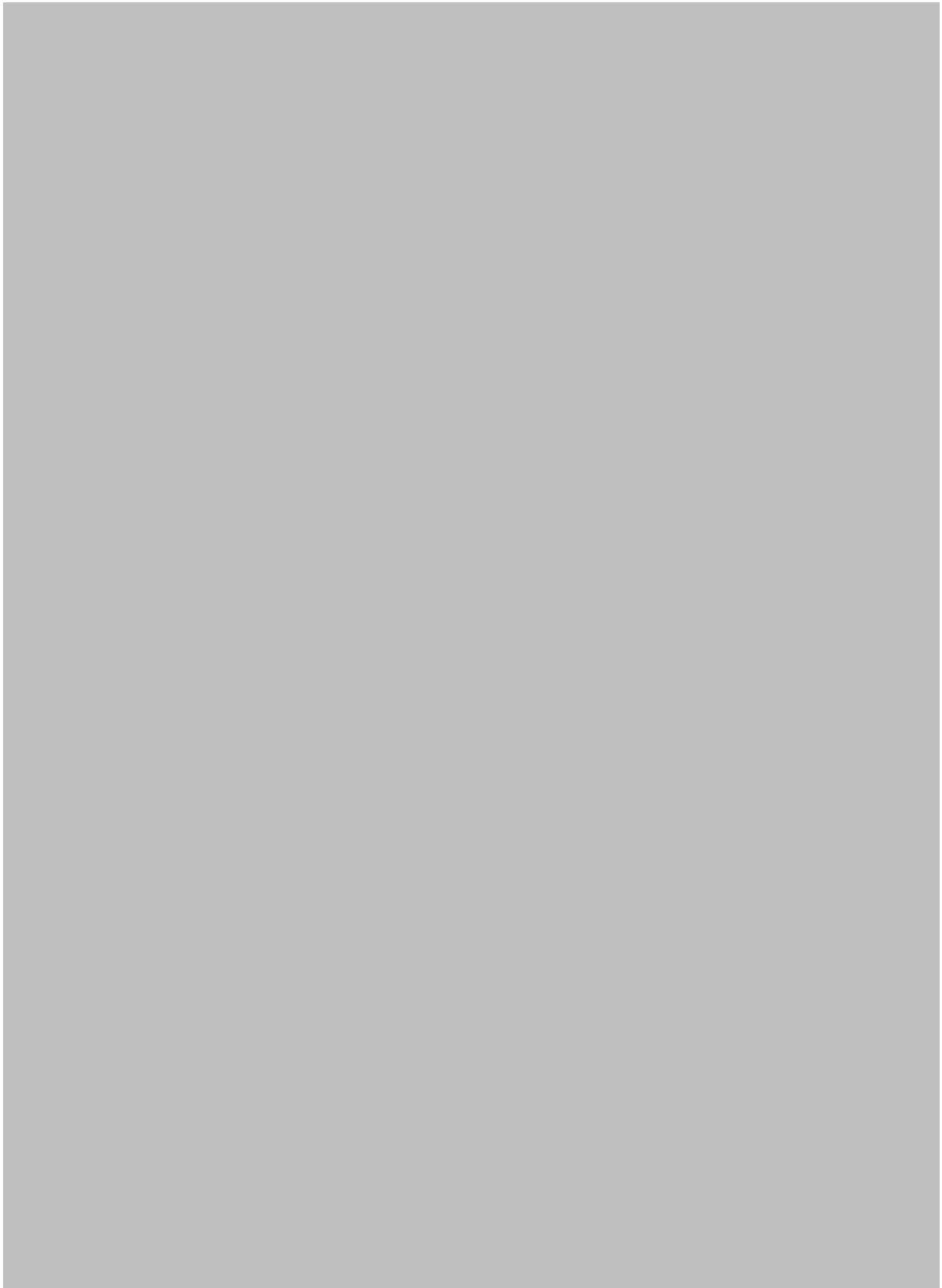


(c)



(d)

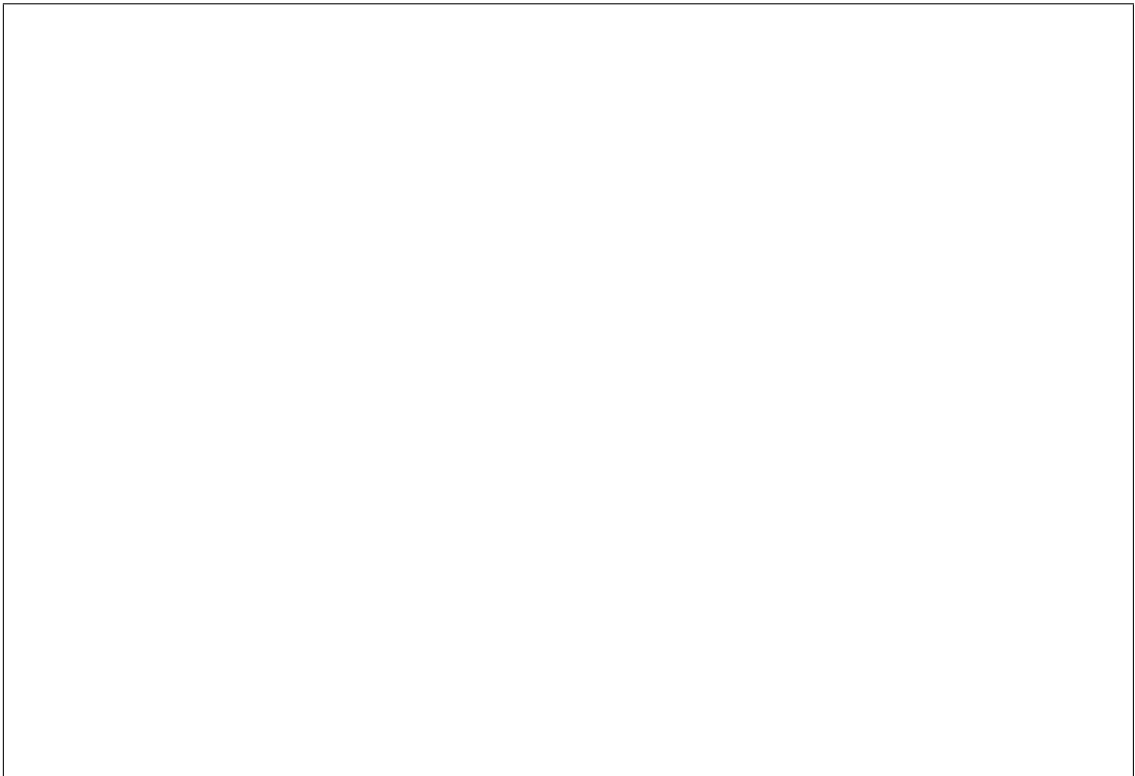


**Question 3 (17 marks)**

(a)



(b)



(c)



(d)

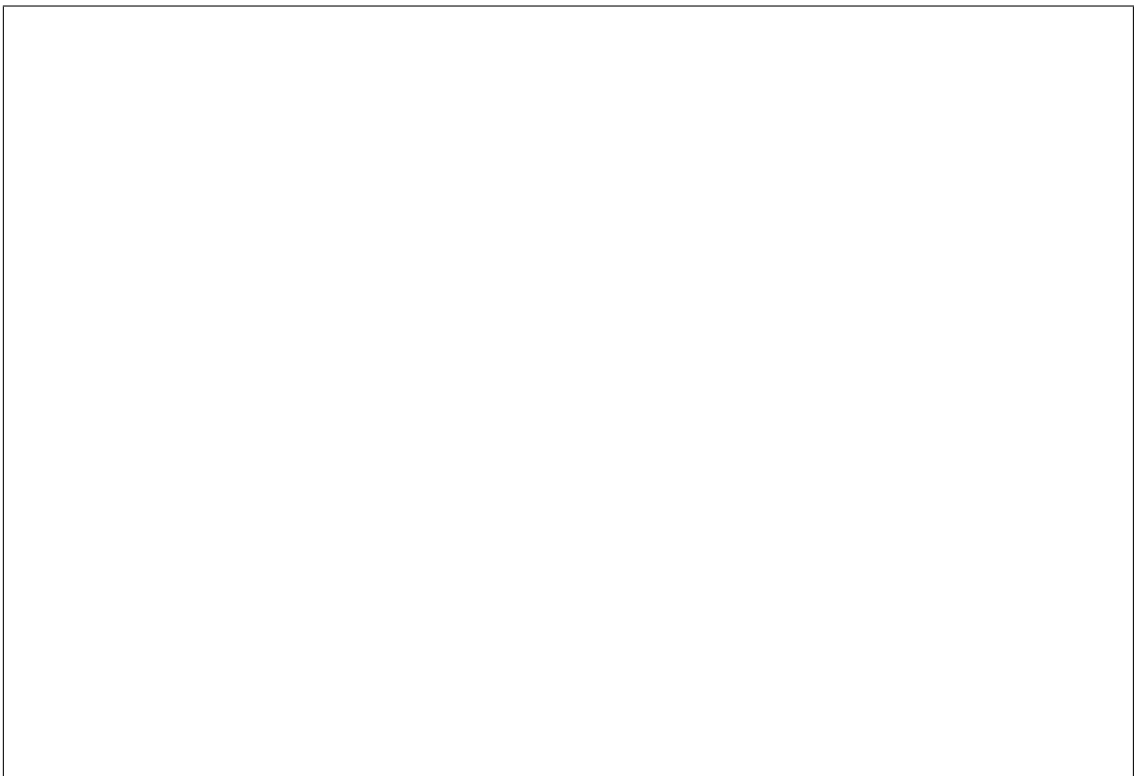




(e)

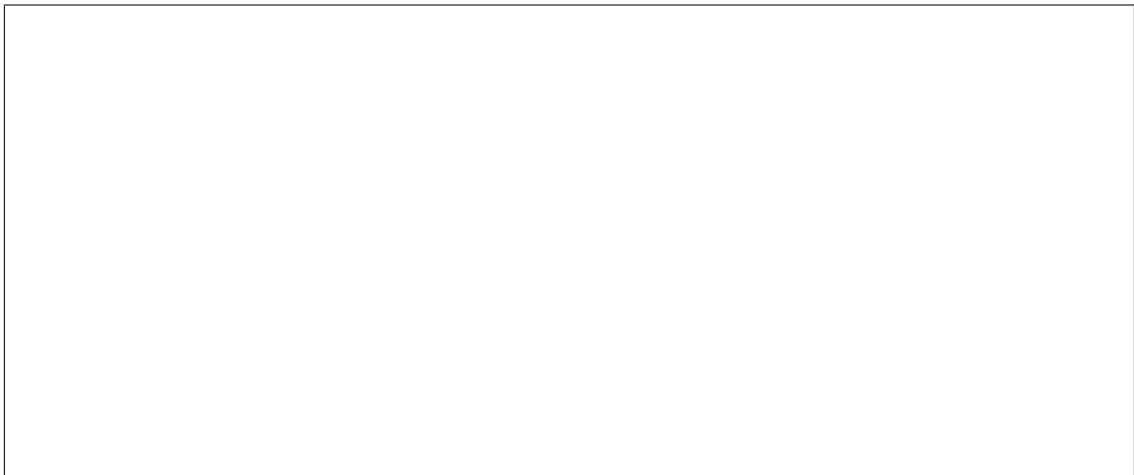


(f)

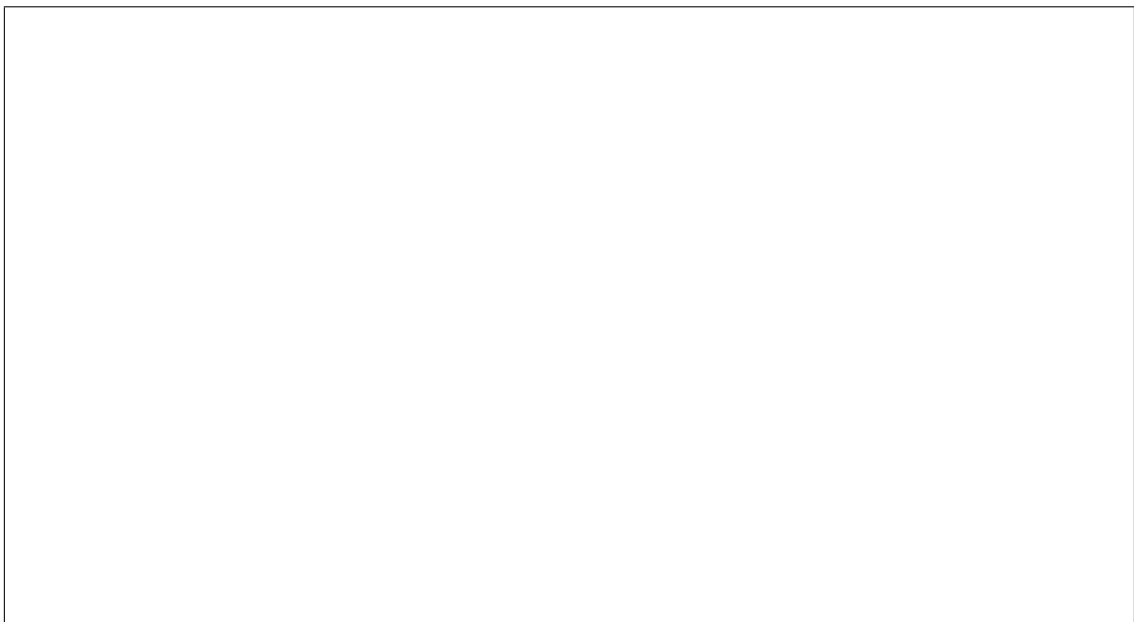


**Question 4 (8 marks)**

(a)



(b)

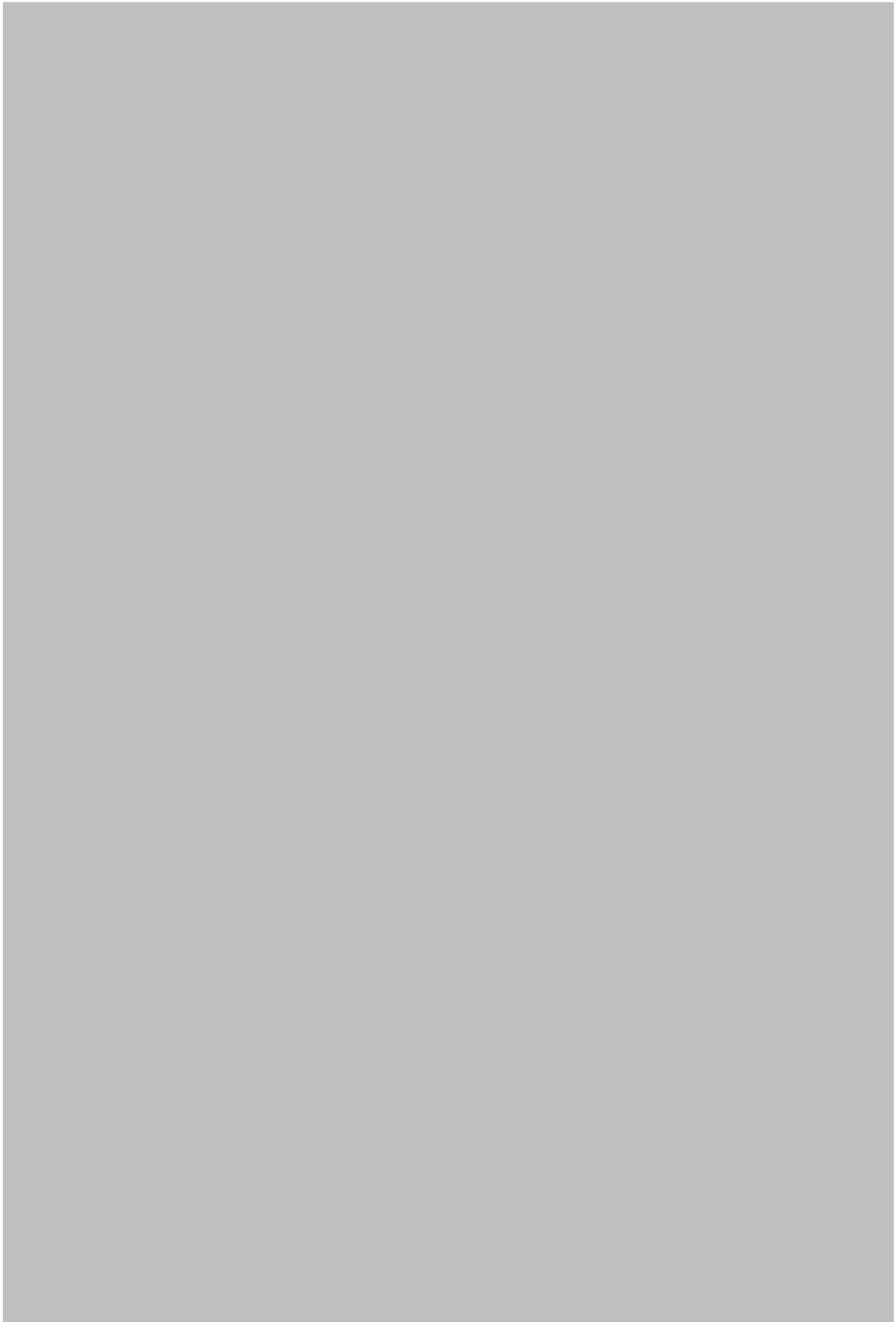


(c)

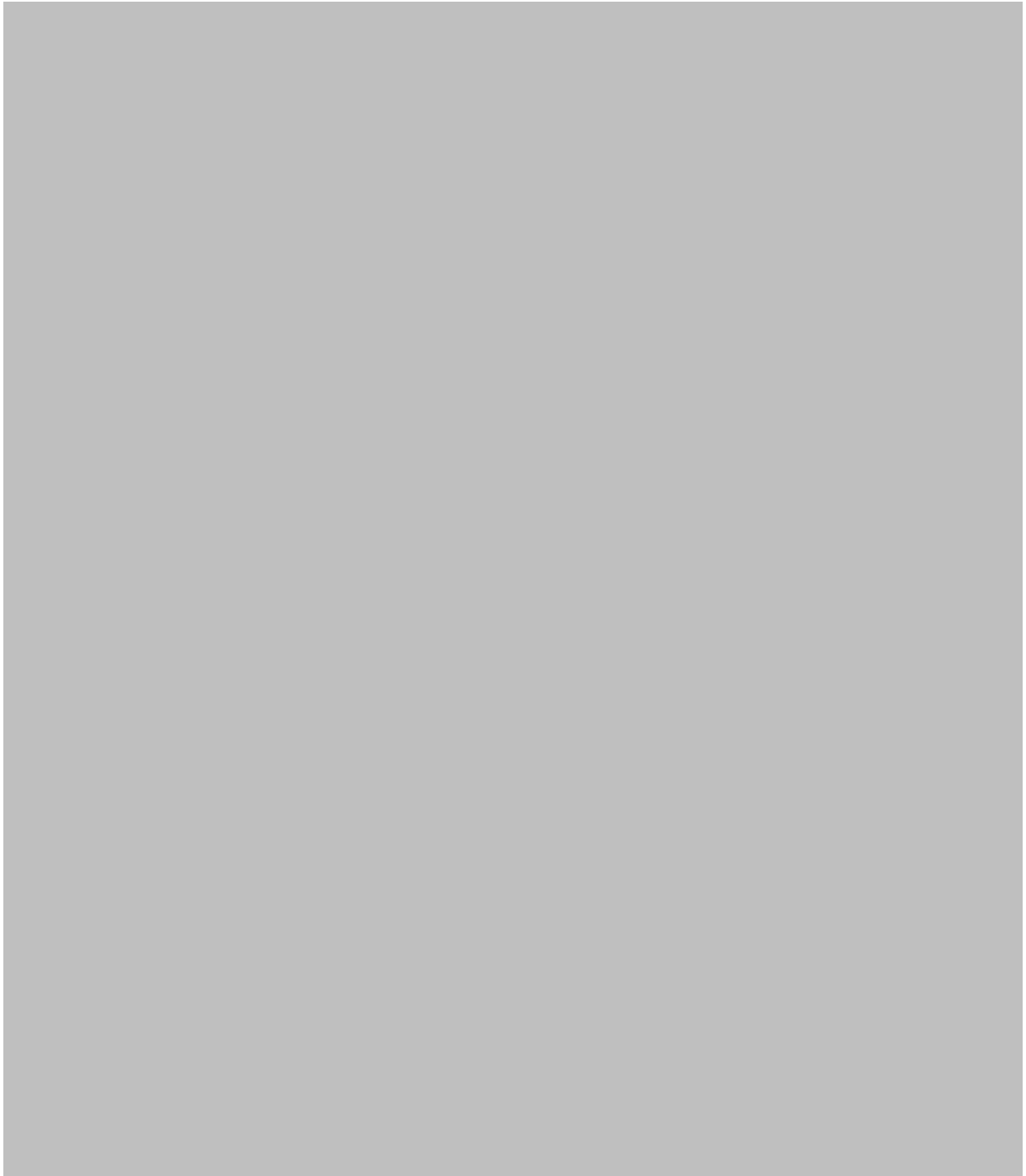


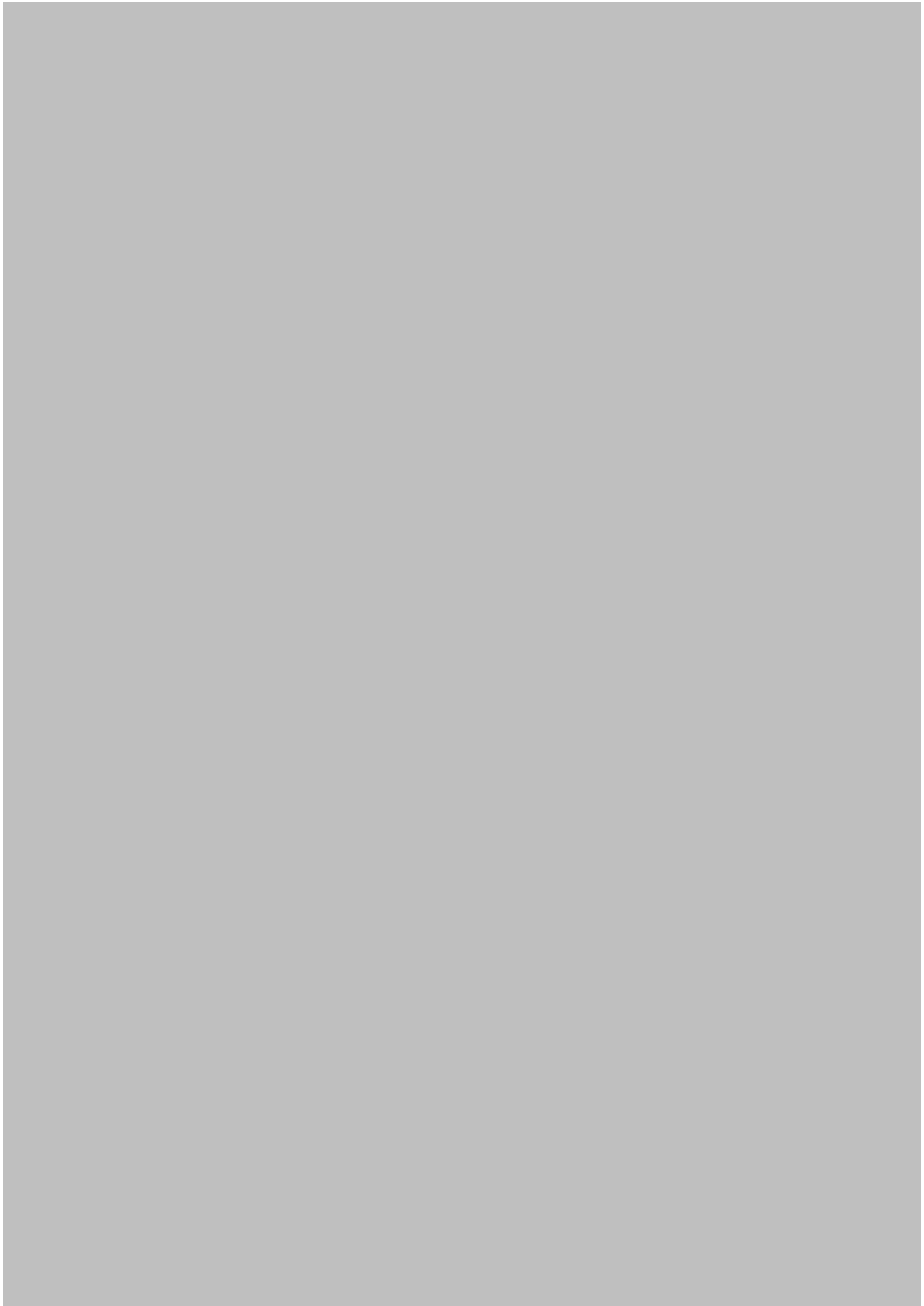
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**Question 5 (16 marks)**



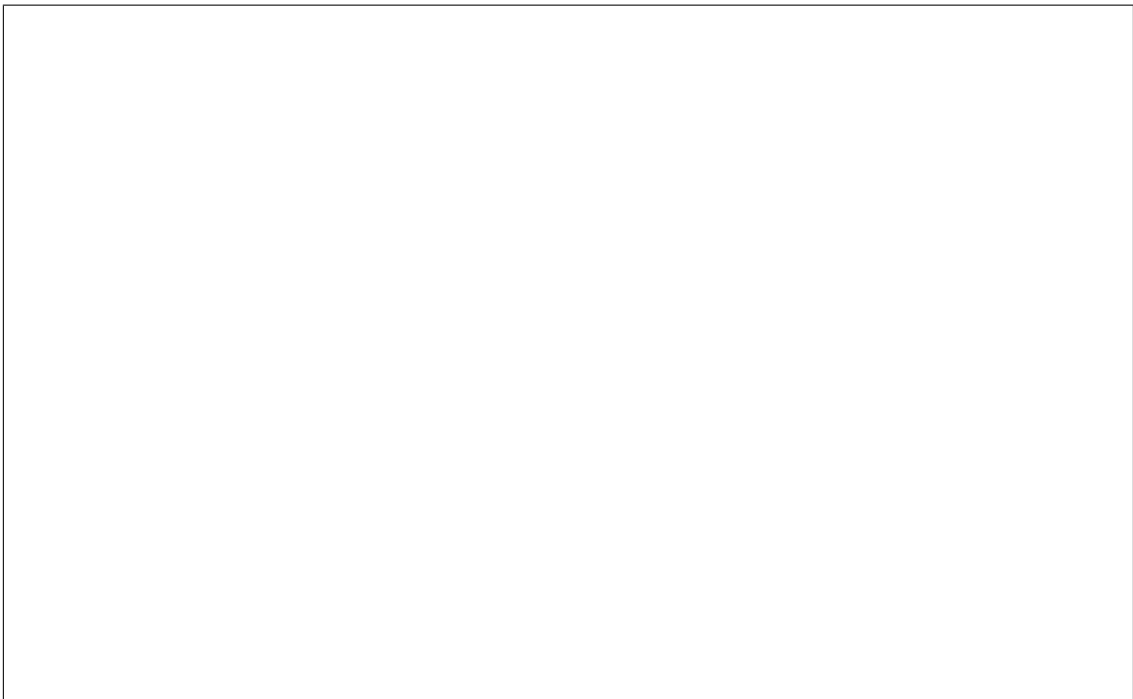




(a)

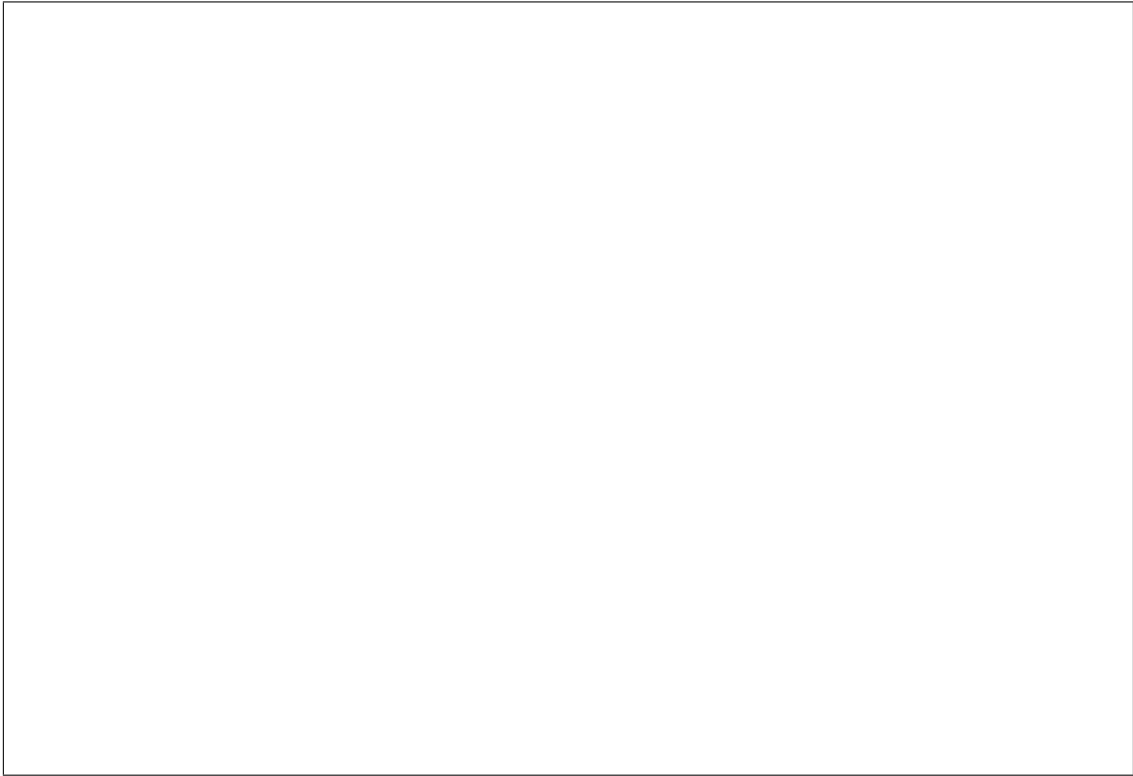


(b)





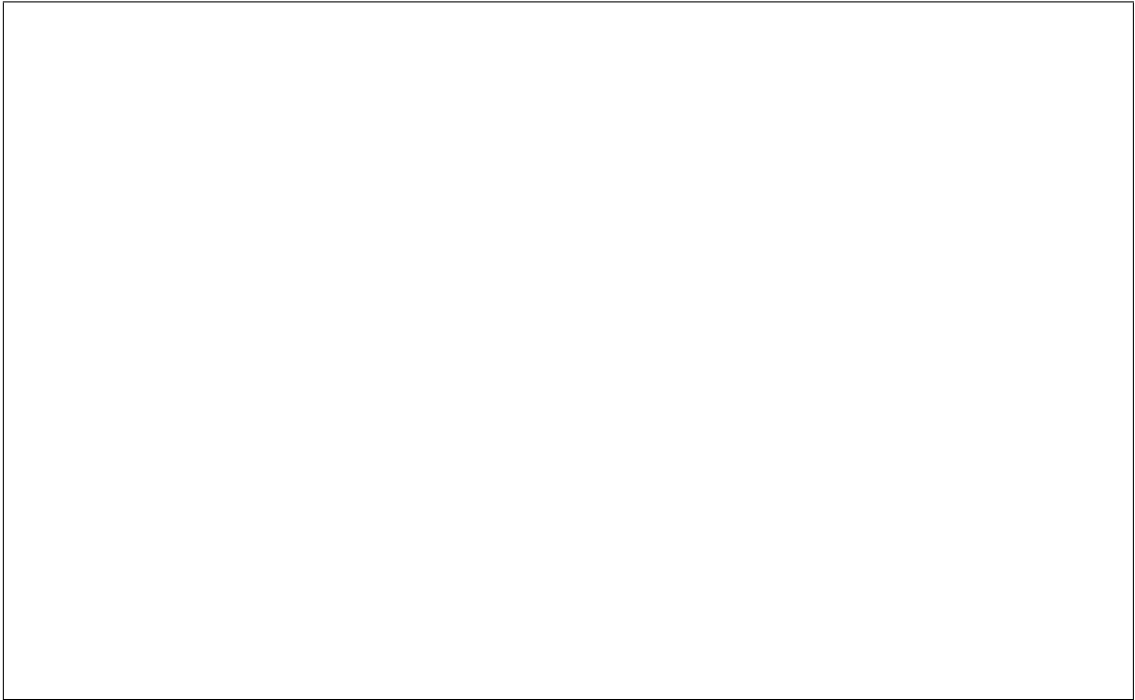
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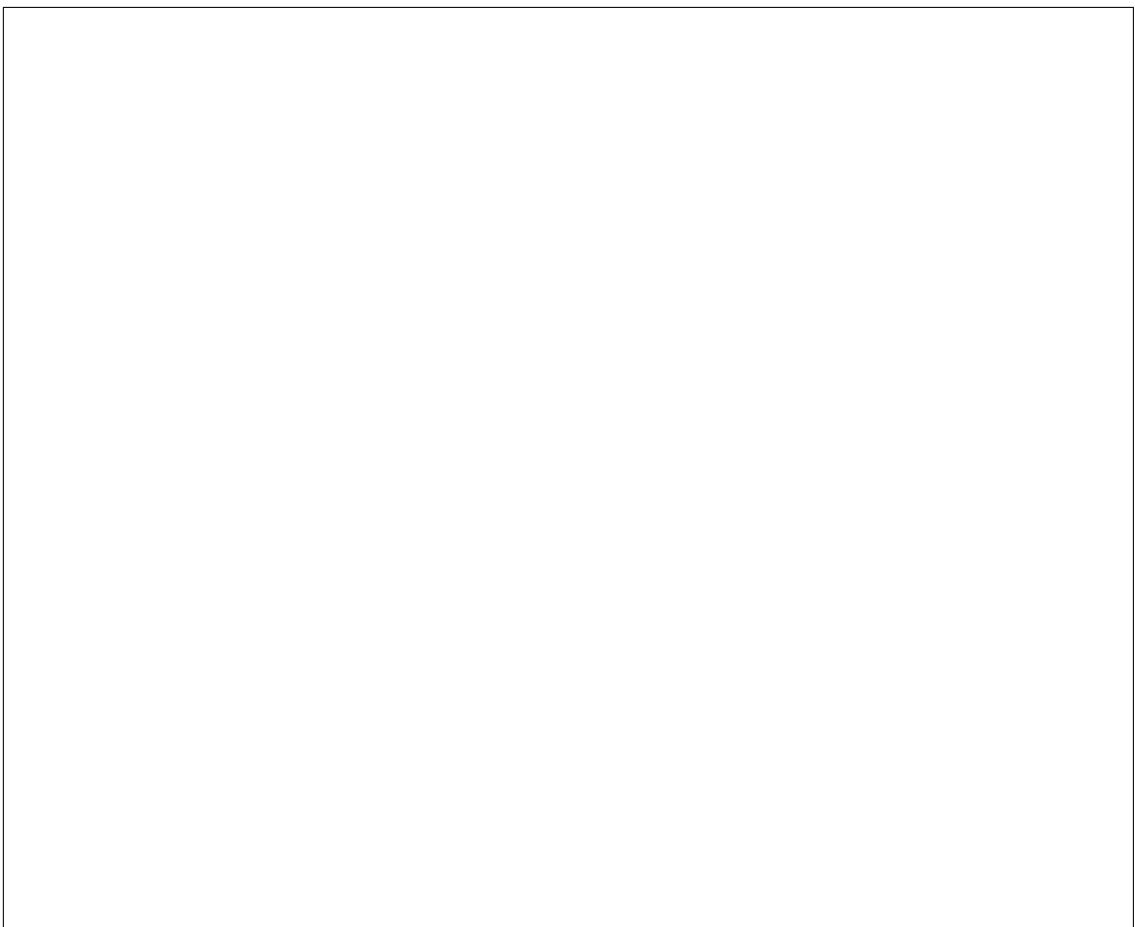
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(e)

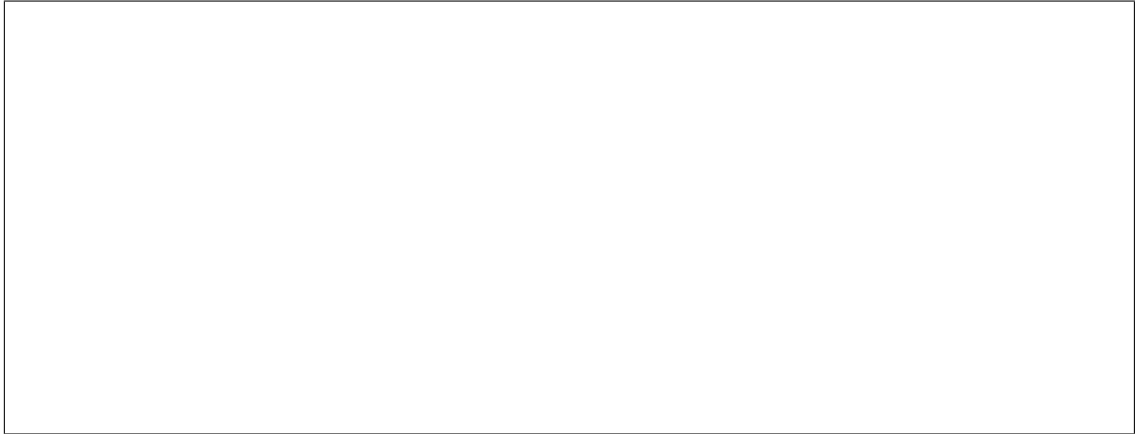


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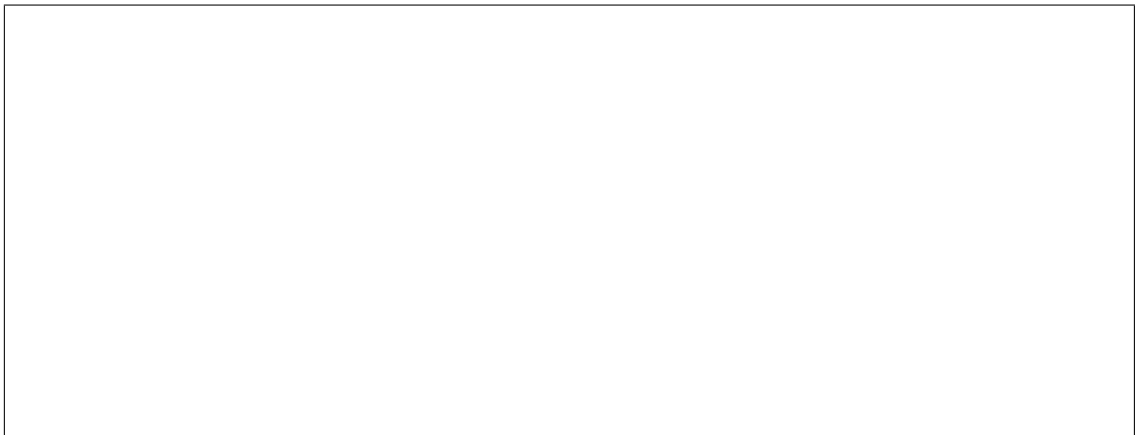


**Question 6 (12 marks)**

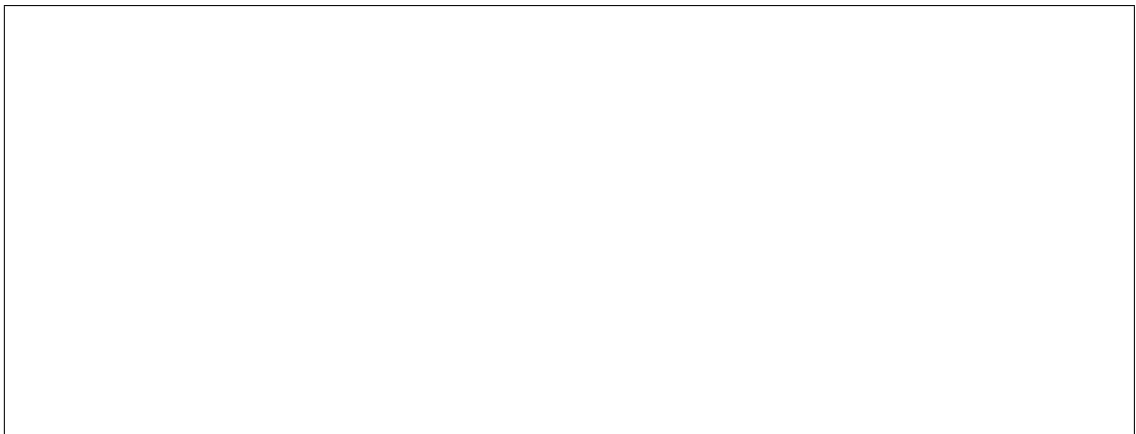
(a)



(b)



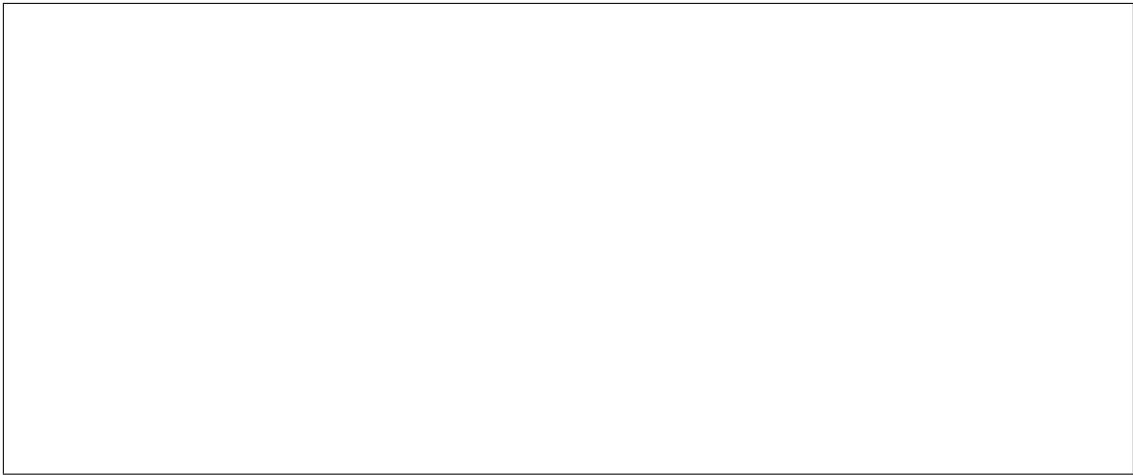
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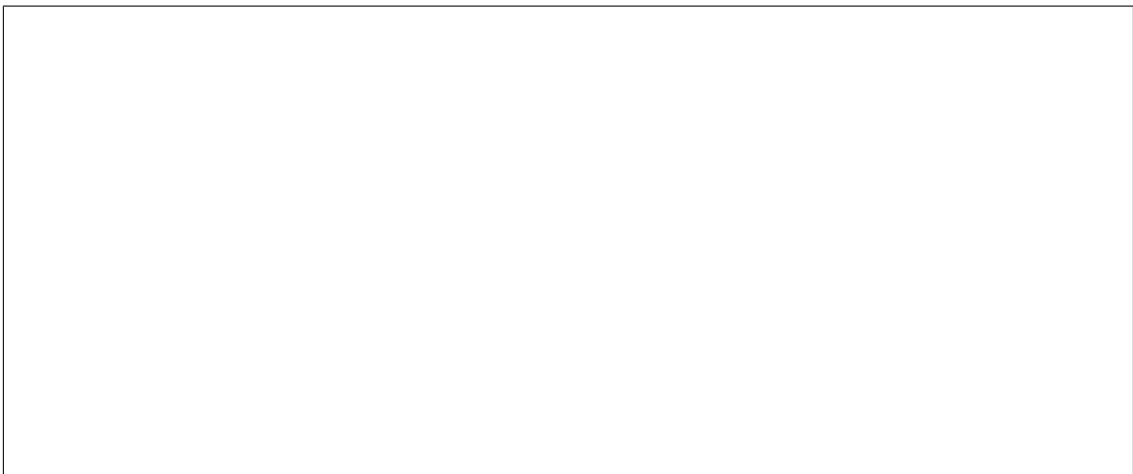
(d)



(e)

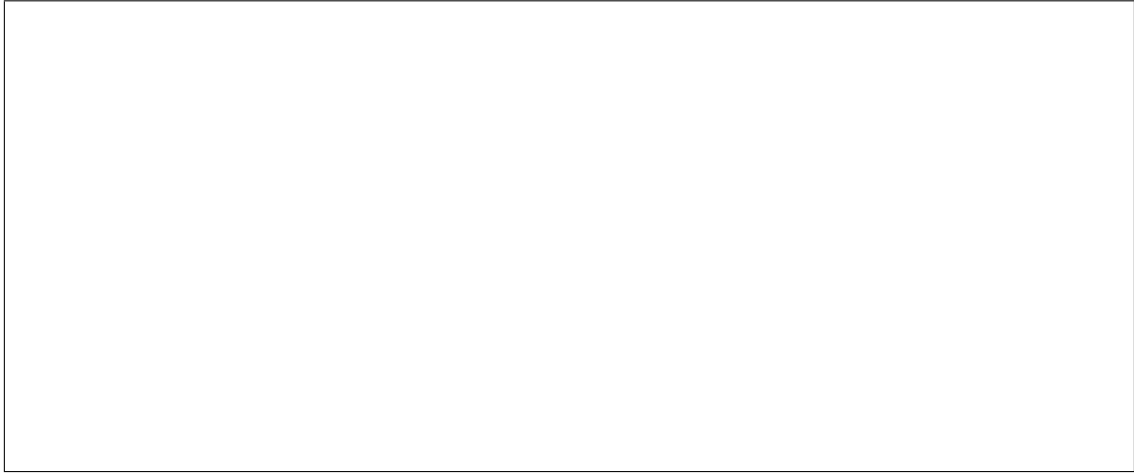


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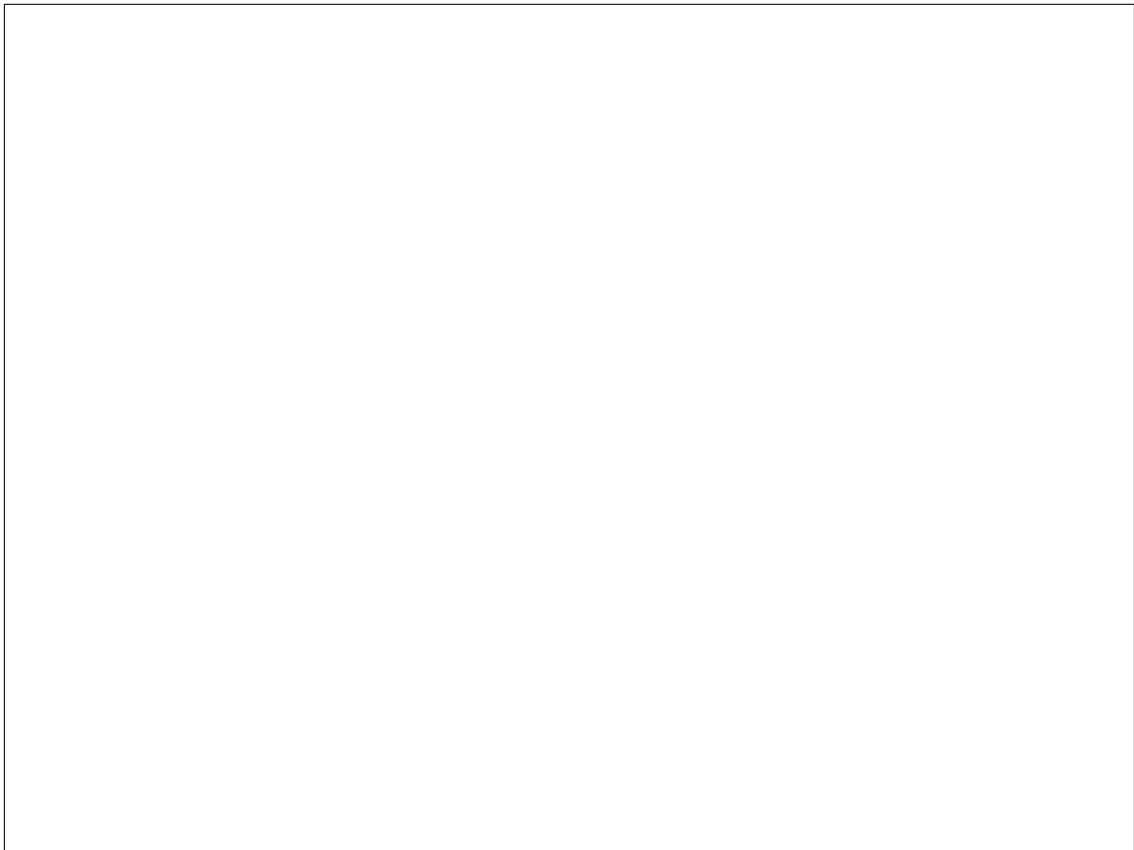


**Question 7 (14 marks)**

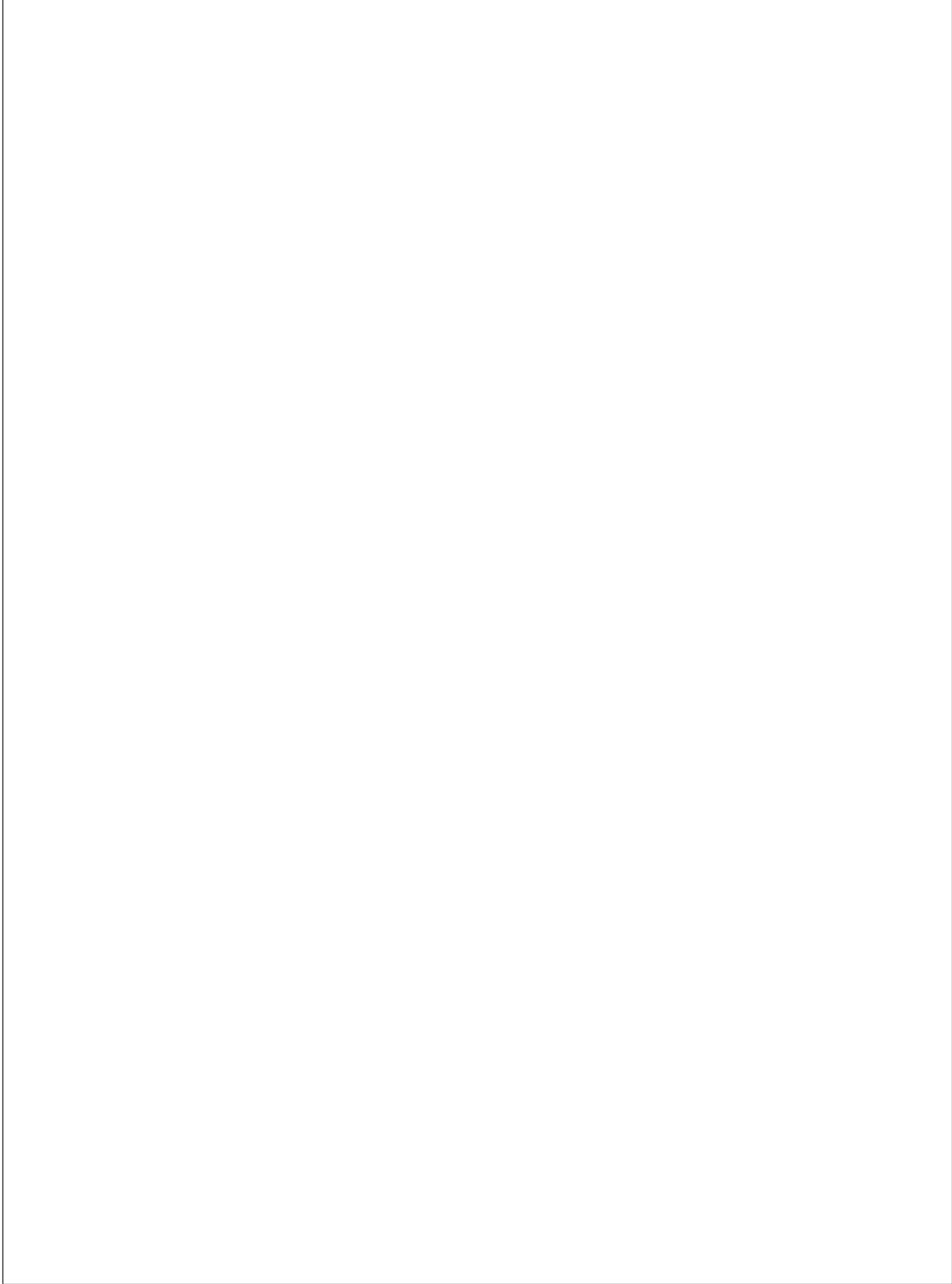
(a)



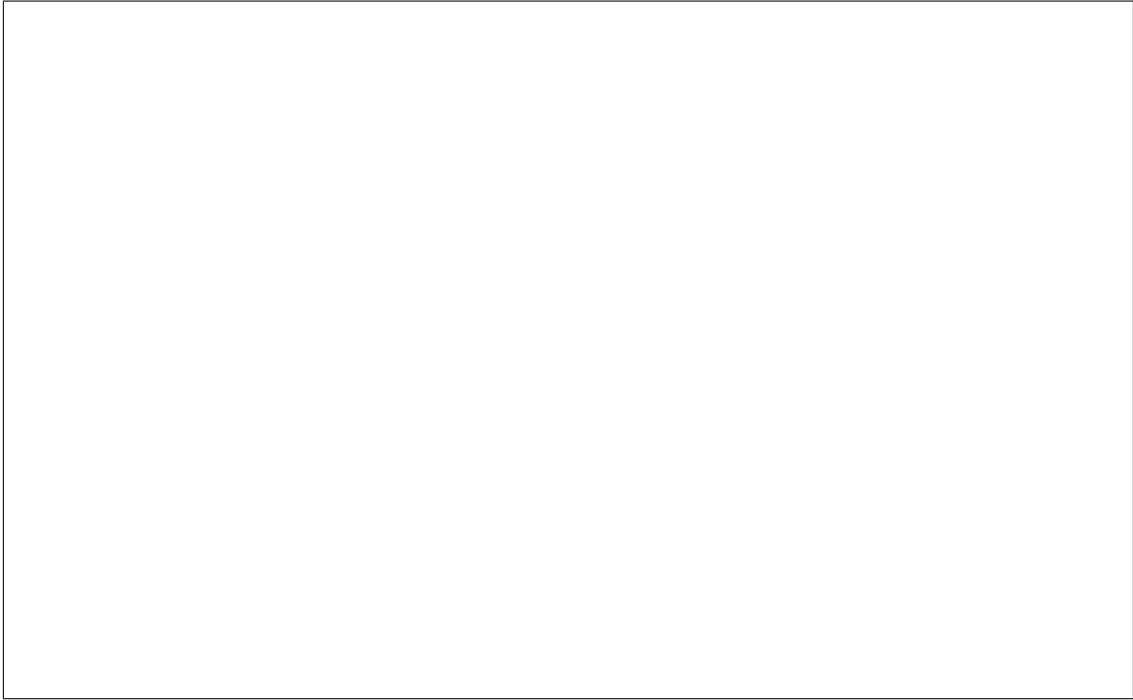
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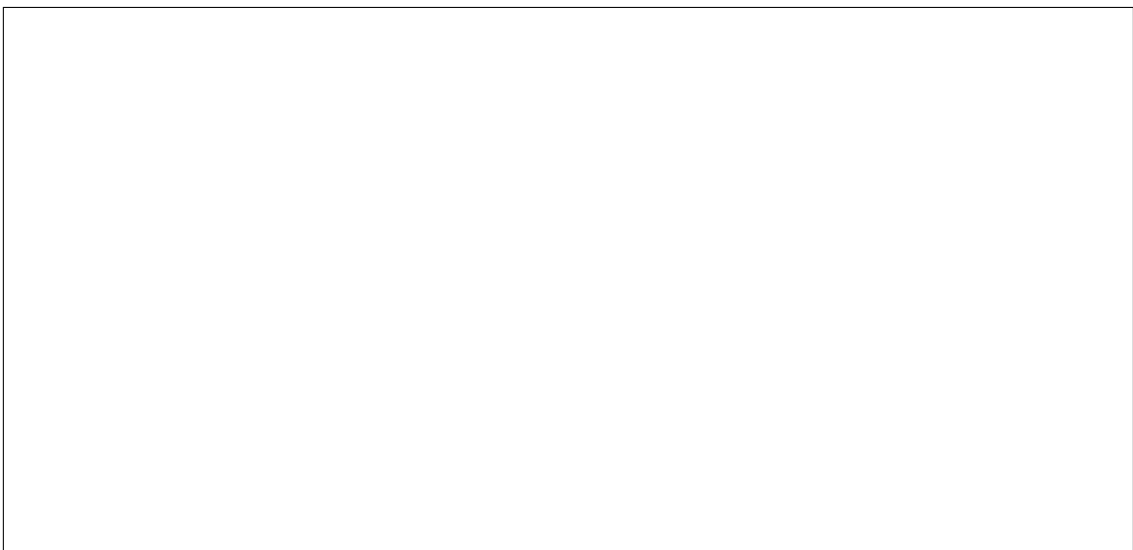
(c)



(d)



(e)

**End of Exam — Total Available Marks = 90**