CHARTERED INSTITUTE OF BANKERS, GHANA
EXAMINER'S REPORT
TECHNOLOGY AND DATA ANALYTICS IN FINANCIAL SERVICES
EXAMINATION MONTH – OCTOBER 2025

1. TITLE OF PAPER AND NAME OF THE DIET

This is the second diet of the Technology and Data Analytics in Financial Services in 2025. It is a three (3) hour paper made up of three (3) Sections. Section 'A' is made up of twenty (20) Multiple Choice Questions (MCQs) for twenty marks, forming 20% of the examination total mark. Section 'B' is made up of four (4) essay or theory type question out of which a candidate answers two (2) questions for 20 marks each, forming 40% of the examination total mark. Section 'C' is made up of three (3) case study or scenario questions out of which two (2) must be answered for twenty marks each, forming 40% of the examination total mark.

A candidate need to obtain more than 50%, in total, to pass the paper.

2. INTRODUCTION: GENERAL OBSERVATION

There were several instances of candidates re-stating a question in the answer booklet before attempting the question – thereby wasting precious time. Some candidates, also, quote the wrong question number in the answer book; may quote question 4 when indeed question 2 may have been answered. Some candidates elect not to indicate question number of questions answered.

Indeed, two (2) students answered question five (5) when the official examination paper questions were up to four (4). Section B had 1 to 4 and section C had 1 to 3. It is worthy of mention, however, that the original questions set were section B 1 to 4 and section C 5 to 7. It is curious to me, therefore, that coincidentally some candidates attempted the non-existent question 5 in the final examination paper. The two (2) answer booklets can be identified with red asterisks (*) on the cover page.

2.1 COMMENTS ON CANDIDATES PERFORMANCE

Artificial Intelligence (AI) aided in setting some of the questions. All the even numbered Multiple Choice Questions (MCQs) were set with AI assistance. Additionally, questions 2 and 4 in section 'B' and question 3 in section 'C' were all set in similar way. The questions cover the entire course contents.

Table 1, below, is a table of statistics on performance for the October, 2025 examination results on the above mentioned examination. Overall, the performance is very good with a class mean of

65.3% and a mode of 70%. The standard deviation is 11.5 and the standard error 1.43. Out of the sixty-five (65) candidates, sixty (60) obtained the pass mark (92% pass rate) and only five (5) candidates failed (8% failure rate). The maximum mark obtain was 88% and the minimum 14%. Details of individual candidate performance is attached as appendix 'A' to this report.

Table 1: Statistics on Performance

Mean	65.32
Standard Error	1.43
Median	66
Mode	70
Standard Deviation	11.51
Sample Variance	132.44
Kurtosis	5.18
Skewness	-1.45
Range	74
Minimum	14
Maximum	88
Sum	4246
Count	65
Largest(2)	84
Smallest(2)	41
Confidence Level (95.0%)	2.85

2.2 SUMMARY STATISTICS ON SPECIFIC QUESTIONS

		Section	Section B				Section C			
S.No	Description	A	1	2	3	4	1	2	3	Total
1	Total No of Candidates	65	17	61	20	31	52	18	56	65
2	Percentage score	100	26	94	31	48	80	28	86	100
3	No of Candidates Passed	45	8	56	13	24	29	12	54	60
4	No of Candidates Failed	20	9	5	7	7	23	6	2	5
5	% of Candidates passed	69.2	12.3	86.2	20.0	36.9	44.6	18.5	83.1	92.3
6	% of Candidates failed	30.8	87.7	13.8	80.0	63.1	55.4	81.5	16.9	7.7

3. GENERAL PROBLEMS IDENTIFIED

Many of the problems identified have been captured, above, under the sub-heading 'Introduction: General Observations.

Out of the sixty-five (65) examination answer booklets delivered for marking one answer booklet, bearing *INDEX NUMBER 10007882*, was tagged with the inscription '*CANDIDATE WAS CAUGHT CHEATING IN THE PAPER*'. Despite the tag the answer booklet was marked. It

is important that the infraction by candidate with *INDEX NUMBER 10007882* is thoroughly investigated.

Appendix A shows the detailed performance as captured from sections B and C as well as summary performance of section A. However, the detailed performance of section A is captured in Appendix B below.

4. <u>SPECIFIC COMMENTS ON EACH QUESTION</u>
<u>SECTION A</u>
All even numbered questions were set with the assistance of Artificial Intelligence (AI). Appendix B, contain details of objective score from Section A. At the base of the table is the summary of individual objective question. The last column contain total score obtained by a candidate in that section. All 65 candidates attempted the question with an average score of 11 out of 20 marks.

Both the AI aided and human questions were equally attempted and with balanced performance in sections B and C. However, in section A, the MCQs, questions 11, 17 and 19 (all odd numbered questions) were set by human and was poorly answered. Coincidentally all were chosen from the text directly. For the avoidance of doubt I reproduce the questions and answers:

<u>Section A, Question 11</u>
In this course 'Big Data and Advanced Analytics' was covered in lecture 1.2.2. Which of the following <u>Best</u> define Big Data?
  i. Large amount of data that is used for complex computer processing
  ii. Complex datasets that traditional data processing methods struggle to handle
  iii. Data encompasses structured information as well as unstructured data
  iv. Advanced analytics techniques
Answer: C
Big Data refers to large and complex datasets that traditional data processing methods struggle to handle. This data encompasses structured information (such as transaction records and customer profiles) as well as unstructured data (including social media posts, emails, and sensor data). Advanced analytics techniques, such as machine learning, artificial intelligence, and data mining, are employed to analyze and derive meaningful insights from this vast amount of data. (page 6)

<u>Section A, Question 17</u>
The accelerated adoption of digital technologies has been driven by several factors. Which of the following is **not** one of them?
  a. Changing customer expectations
  b. Competitive presence
  c. Cost efficiency and scalability
  d. None of the above
Answer: B
In conclusion, the accelerated adoption of digital technologies has been driven by a combination of technological advancements, changing customer expectations,

competitive <u>pressures</u>, cost efficiency and scalability, regulatory requirements, and the impact of the COVID-19 pandemic. (page 19)

<u>Section A, Question 19</u>
According to the course manual Agricultural Development Bank (ADB) is an example of a Ghanaian bank that has successfully adopted technology to enhance banking services and support the agriculture sector which has yielded positive results. Which of the following is not a key example of how technology adoption has yielded results for ADB?
      a. Mobile Banking and Agency Banking
      b. API Integration and Developer Tools
      c. All the above
      d. None of the above
Answer: **B**
API Integration and Developer Tools: Hubtel provides API integration and developer tools that enable businesses to integrate Hubtel's services into their existing systems and applications. (page 20)

<u>SECTION B</u>
Question 1
Candidates were to examine the evolution of Technology, along with storage devices, in the financial sector. Most candidates wrote about the evolution of computers only. Candidates were not able to associate the evolutionary periods with the storage at the various times. Just a few of the candidates mentioned storage devices and only a few got the sequence right in their essay. Seventeen (17) candidates attempted the question with an average score of 10.

Question 2
The question required candidates to discuss the role of data analytics in financial decision-making, highlighting its benefits and challenges. Some candidates wrote on benefits and said either nothing or very little about the challenges. However, marks were evenly allotted to both benefits and challenges. Under the circumstances, marks were skewed in favour of benefits but candidates who did not write on challenges lost marks, irrespective of how much they wrote on benefits. As much as 61 candidates attempted the question with an average of 16 out of 20 marks.

Question 3
Candidates were required to provide key components of a well-structured Information Technology (IT) Function to effectively manage technology in banks. Most candidates wrote about 'components of a well-structured Information Technology'. It appears candidates were confused or misread the question. No wonder only 20 candidates answered the question with an average score of 14 out of 20 marks.

Question 4
In explaining the application of Machine Learning in finance, focusing on credit risk assessment and portfolio optimization, majority of the candidates dealt with risk assessment but left out or

ignored the portfolio optimization bit. It is suspected candidates were not conversant with portfolio management. Only 31 candidates attempted the question and obtained an average score of 12 out of 20 marks.

SECTION C
Question 1
This was a case study question on ethics. Candidates were required to identify any two (2) ethical dimensions in a court case, consider an approach taken to implement an application software by a firm and to identify responsibility, accountability and liability of parties to an action. Fifty-two (52) candidates attempted the question with an average score of 10.6. The maximum mark was 18 and the least mark was 4. Many of the candidates who attempted the question had very low marks. Indeed, it is worthy of mention, during the examination a candidate was of the view there was a mistake in the question when there was none.

Question 2
This was a scenario question on Information Communication & Technology (ICT) Policy, specifically on Access Control Policy. Candidates were required to show their understanding, appreciation and obedience to the ICT policy and not to respected persons (management) by responding to a query letter. Some of the candidates did not use letter format as required and some did not make reference to the query letter.

Only eighteen (18) candidates attempted the question. The maximum score was 20 and the minimum was 7, with an average score of 12.9. It appears candidates are not conversant or in tune with their organization's ICT policy. The performance was not encouraging.

Question 3
This was a straight forward pros and cons answer. Candidates were required to identify and explain any five (5) advantages and five (5) disadvantages of Digital Transformation in Banks. This was one of the popular questions. Fifty-six (56) candidates attempted the question obtaining an average of 16.8 (17). The maximum score was 20 and the minimum was 6 marks.

5. **CONCLUSION**
One candidate was caught cheating during the examination, this is co tagged on the cover of the answer booklet. The nature of cheating is worth investigating.

It is recommended that each topic treated must be backed by an appropriate case study to drill home technology concepts and principles in candidates.

Submitted.

Appendix A

<table>
<tr><th colspan="13">Chartered Institute Of Bankers, Ghana</th></tr>
<tr><th colspan="13">Associateship Examinations</th></tr>
<tr><th colspan="13">Technology and Data Analytics in Financial Services</th></tr>
<tr><th colspan="13">Level III - October 2025 Examination ScoreSheet</th></tr>
<tr><th rowspan="2">S.No</th><th rowspan="2">Index Number</th><th>Section</th><th colspan="4">Section B</th><th colspan="3">Section C</th><th rowspan="2">Total Score</th><th rowspan="2">Status</th><th rowspan="2">Remarks</th></tr>
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#										Total	Result	Notes
22		10		15	4		3	9		**41**	Fail	
23		13		20		14	7		18	**72**	Pass	
24		0		14						**14**	Fail	Sticker on Booklet
25		10	6	10				10	20	**56**	Pass	
26		11		12		11		14	18	**66**	Pass	
27		11		11		14	13		20	**69**	Pass	
28		14	20	20				12	16	**82**	Pass	
29		13		15	20		10		19	**77**	Pass	
30		12		13	20		15	17		**77**	Pass	
31		9		15	12		8		18	**62**	Pass	
32		11		16		12	10		20	**69**	Pass	
33		9	2	19			12		18	**60**	Pass	
34		10		18	19		9			**56**	Pass	
35		13		16		13	14		18	**74**	Pass	
36		12	18	20			12		11	**73**	Pass	
37		12		15			6		15	**48**	Fail	
38		10		12		9	15	7		**53**	Pass	
39		9		20		5	11		16	**61**	Pass	
40		11	16	17			10	10		**64**	Pass	
41		13		16		4	10		20	**63**	Pass	
42		8		17		12	14		20	**71**	Pass	
43		11		14		12	9		16	**62**	Pass	
44		10		15	10		7		19	**61**	Pass	
45		13	12	15		12			14	**66**	Pass	
46		14		19	20		18		17	**88**	Pass	
47		13		20	10		10		20	**73**	Pass	
48		11		11		11	11		10	**54**	Pass	
49		9	2	18			15		17	**61**	Pass	

No									Total	Result	
50	13		19		11		12	6	**61**	Pass	
51	12		17		12	8		17	**66**	Pass	
52	11	10	12				16	16	**65**	Pass	
53	13		16	20		14		20	**83**	Pass	
54	15		20		14	4		18	**71**	Pass	
55	13	2	20			11		14	**60**	Pass	
56	12	16	17			9		16	**70**	Pass	
57	10		14		7	13		20	**64**	Pass	
58	13		19		10	10		18	**70**	Pass	
59	10		20		15		12	20	**77**	Pass	
60	10		14		12	13		14	**63**	Pass	
61	10			5	11	12		19	**57**	Pass	
62	15		20		14	7	20		**76**	Pass	
63	11		20		17		8	20	**76**	Pass	
64	14	6	12			10		15	**57**	Pass	
65	13		16	14		14		11	**68**	Pass	
Total Count	65	17	61	20	31	52	18	56	**65**	60	**Passed**
Average	11.4	10.4	16.0	13.8	11.6	10.6	12.9	16.8	**65.3**	5	**Failed**

Appendix B

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