

Professional Level – Options Module

Advanced Performance Management

Thursday 4 June 2015



Time allowed

Reading and planning: 15 minutes

Writing: 3 hours

This paper is divided into two sections:

Section A – This ONE question is compulsory and MUST be attempted

Section B – TWO questions ONLY to be attempted

Present Value and Annuity Tables are on pages 12 and 13.

Do NOT open this paper until instructed by the supervisor.

During reading and planning time only the question paper may be annotated. You must NOT write in your answer booklet until instructed by the supervisor.

This question paper must not be removed from the examination hall.

The Association of Chartered Certified Accountants

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Paper

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Section A – This ONE question is compulsory and MUST be attempted

- 1 Merkland Sportswear (MS) is the market leader in sportswear in Ceeland, selling a variety of sportswear products under its own well-known brand. It is primarily a product development and marketing business as it contracts out all of its manufacturing to third parties around the world and it mostly sells its products through third-party retailers. It has only one store which is located in the capital city of Ceeland. The purpose of this store is to act as a centre for its marketing activities and to be a tangible representation of the MS brand. However, the main marketing activity for MS is the recruitment and promotion of star sports men and women as MS brand ambassadors. MS tries to have the most well-known sports star in each of the 10 most popular sports in Ceeland as an ambassador.

You are a performance management advisor to MS, brought into the company by the chief executive officer (CEO) to help the board with a number of issues. The first area which the board of MS requires your input is in a review of the existing performance dashboard for MS (Appendix 1). The dashboard is deliberately kept focused as it is for board use and the CEO has indicated that the three performance headings of 'financial, design and brand' will be kept at this time. The board has accepted that there may need to be up to two metrics for each of 'brand' and 'design' but they want to keep the number of financial metrics at three.

The mission statement of the business is designed to be broadly appealing. It is 'to inspire Ceelanders to compete'. From a business perspective, the aims are more focused, MS aims to grow as a business and to maximise shareholder wealth. The CEO further clarified the broad strategy to achieve these aims saying, 'We want to inspire competition not just in our customers but also within the company, to seek our greatest competitive advantage. We will achieve this by creating innovative products which provide reduced risk of injury and enhanced sporting performance supported by the best marketing operation in Ceeland.'

In order to assist in providing more detailed strategies to achieve these aims, the board has instituted a review of the competitive position of MS by commissioning a SWOT analysis (Appendix 2).

The CEO has asked that your first task be a review of the current dashboard metrics (Appendix 1). You should then review the SWOT analysis to suggest changes to the dashboard metrics within the constraints which the CEO has outlined.

Also, you are given details on a recent new development in the market. Nush Sportswear, one of the major competitors of MS, has recently suffered a scandal which has been widely reported. An investigative reporter discovered that one of the suppliers who manufactured sports shoes for Nush had been using child labour. The country in which the manufacturer worked had rules prohibiting child labour, but enforcement was very weak. This story has been widely covered in the media and has led to consumer boycotts and a review by the Ceeland business regulator into Nush's sourcing policies. It has been discovered that this is common practice in the sports footwear business where manufacturing is outsourced to such countries.

MS' shareholders have reacted with alarm to the potential damage that this could do to MS' brand. They have asked the board to consider changing their policy of outsourcing footwear manufacture. The board is considering two alternative responses:

1. Review and ensure that all outsourced footwear manufacture complies with appropriate employment terms and conditions (where necessary manufacturing would move to third-party companies in countries with appropriate regulation and enforcement); or
2. Create a manufacturing operation for MS in order to have full control of operations.

In response 1, the review of existing third-party manufacturers is being performed by a team from the procurement department. They have also considered the impact of moving all footwear sourcing to more strictly regulated environments. The results of this investigation are given in Appendix 3 and the board wants an evaluation of the qualitative and quantitative impact of this response.

In response 2, the board is considering setting up a factory for the manufacture of all MS footwear. They want to understand the impact of this on MS' existing performance metrics. First, they need a forecast of the profit from the factory as there are three distinct economic scenarios under which it might operate (see Appendix 4 for details).

Second, the board wants to know how the new factory will impact on the existing performance dashboard. However, since the probabilities of these economic scenarios are under debate, the board has said that they want this work to be independent of the results of the profit calculation from Appendix 4. Therefore, the board wants you to use an

estimate of \$103m profit before interest and tax from the new factory to evaluate the impact of the new factory on the dashboard. (This estimate is before product development and marketing costs as it only represents the manufacturing operation at the factory.)

Finally, the consultant who did the SWOT analysis has mentioned to the board that if they are thinking of reviewing their existing strategies, then they should consider using the value chain to secure competitive advantage. The CEO thinks that you should assess the implications of using the value chain for the performance management of MS. (An outline of the value chain is given in Appendix 5.)

Required:

Write a report to the board of MS to:

- (i) Assess the existing five metrics (Appendix 1). Using the SWOT analysis in Appendix 2, make suggestions for improvements within the constraints outlined by the CEO.**

Note: You should ignore the impact of the Nush scandal in this part of the question. (16 marks)

- (ii) Using the data in Appendix 3, assess the qualitative and quantitative impact on performance management at MS of response 1.** (8 marks)

- (iii) Calculate the expected operating profit of the new factory and evaluate the use of this method of decision-making under risk.** (6 marks)

- (iv) Using 2015 figures as a base, evaluate the impact of the new factory on the values and choice of metrics in the existing dashboard.** (10 marks)

- (v) Explain the implications of using the value chain for performance management at MS.** (6 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer.

(4 marks)

(50 marks)

Appendix 1

MS performance dashboard

Report for the year to March 2015

	2015	2014	2013	Change 2015/2014 %
Financial				
Revenue (\$m)	273	238	209	14.7%
Operating profit (\$m)	71	60	54	18.3%
ROCE	41.7%	37.5%	36.0%	11.2%
Design				
Design awards won	2	2	1	0.0%
Brand				
Awareness	64%	63%	59%	1.6%

Notes:

Design awards are national clothing design awards which address both the look and technology in a product.

Brand awareness is the percentage of those sampled who could identify the company's logo and can name at least one of its products.

Appendix 2

SWOT (completed before the Nush scandal was reported)

S: <ul style="list-style-type: none">– High market share– Excellent brand awareness– Strong revenue growth (compared to industry average of 11%)– Supply chain management	W: <ul style="list-style-type: none">– Loss of a key brand ambassador (who was injured when he tripped over the laces of his MS boots)– Weak IT expertise
O: <ul style="list-style-type: none">– New products in the market for new sports (such as those being introduced at each World Championships)	T: <ul style="list-style-type: none">– Growth of social media as main marketing channel

Appendix 3

Procurement review of new outsourced footwear manufacturers

Currently, MS buys 2 million pairs of shoes at an average of \$21 per unit (a pair of shoes) and we assume an average selling price of \$75. Cost per unit will increase by 10%. Additionally, there will be a need to perform annual audits of these suppliers which will cost \$0.5m.

The change of policy will be marketed as sustaining the values of MS. The MS ethics code states 'We will play fair and source our goods responsibly.' This marketing will cost \$0.8m p.a. but it is hoped that this will produce a gain in market share. However, the increase in sales cannot be estimated at this time as competitors are making similar moves. The reviewer commented, 'It would be helpful to know how many units we would need to sell in order to cover these increased costs so this can be used as a marketing target.'

Appendix 4

New factory

The data collected on the new factory depends on three possible economic scenarios in response to MS' change in sourcing policy:

	Bad	Medium	Good
Probability	30%	60%	10%
Units manufactured ('000s)	1,800	2,000	2,200
Variable costs per unit (\$)	21	22	23
Fixed costs (\$'000s)	2,500		
Capital required	\$'000		
Building and equipping	36,000		
Working capital	11,000		

Notes:

One unit is one pair of shoes.

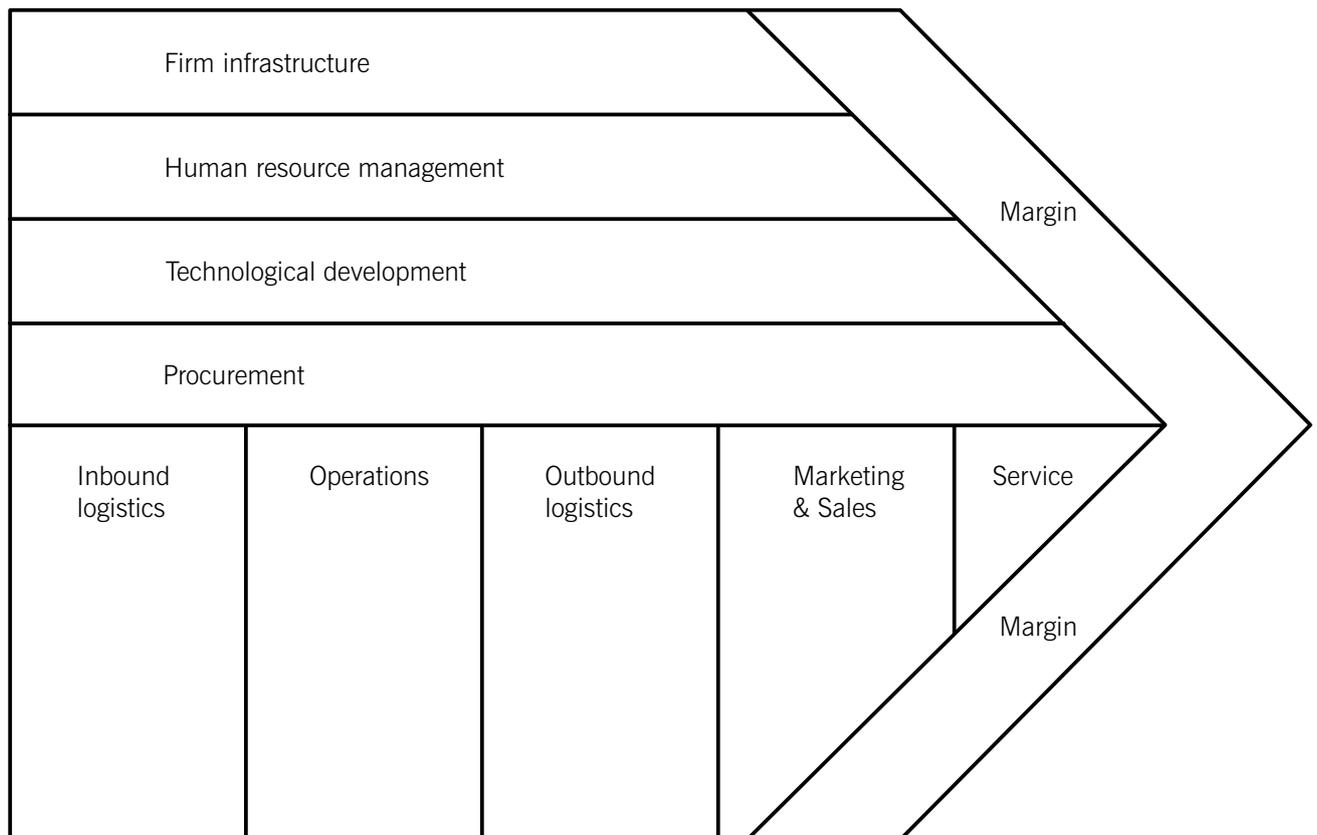
Assume all units made are sold.

Assume an average selling price of \$75.

The total Ceeland market for this type of shoe is estimated as 6.25m p.a.

Appendix 5

Value chain analysis



Section B – TWO questions ONLY to be attempted

2 Forion Electronics (Forion) manufactures a range of electronic goods. Its business has grown rapidly over the last ten years and is now complex and international. Forion manufactures over 100 different products, selling into 25 different countries. There is a supplier base of over 200 companies from which Forion sources. As the business has become more complex, the board has found it difficult to pull together all the information that they require in order to make decisions.

The current information systems are developed in-house and are based in the functional departments (such as purchasing, manufacturing, warehousing and delivery, selling and marketing). The organisation uses the financial system as a means of bringing together information for an overview of corporate performance.

There have been a number of examples of problems encountered with information in Forion:

- there are inefficiencies arising from ordering the wrong amount of subcomponents;
- there are often stock-outs or obsolescence of unsold goods in the warehouses, although the marketing department prepares good sales forecasts; and
- sometimes, there are insufficient delivery vehicles available to meet customer deadlines.

The board of Forion believes the problems arise from poor information sharing within the company. They are considering the purchase of an enterprise resource planning system (ERPS) to be the single information system for the whole organisation.

Also, Forion is planning to launch a smartphone. However, in order to make it competitive they need to have high-visibility, durable screens. As the cost of screen development is considerable, it has been decided to form a strategic alliance with a well-known screen manufacturer to provide this key component for the new smartphone. Bon Accord Screens (BAS) has been chosen as the strategic ally, as they have a strong reputation for their quality of manufacturing and new product development. BAS has been trying to break into the smartphone market for several years.

The alliance agreement has stipulated three critical areas of performance for BAS' supply to Forion:

1. quality of manufacturing, measured by fault rates of screens supplied being within agreed tolerances (so that they fit Forion's phone-bodies);
2. time of delivery, measured by the number of times a shipment is more than one day overdue; and
3. the ability to provide technical upgrades to the screens as the market demands.

The service level agreement (SLA) will be based on these three points and there will be financial penalties built into the agreement if BAS fails to meet these.

Required:

- (a) **Discuss the integration of information systems in an ERPS and how the ERPS may impact on performance management issues at Forion.** (10 marks)
- (b) **Evaluate, from Forion's viewpoint, the usefulness of the three critical areas in the alliance agreement for measuring the performance of BAS.** (8 marks)
- (c) **Evaluate the relative reliability of financial and non-financial data from internal and external sources in the context of the alliance between Forion and BAS.** (7 marks)

(25 marks)

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Question 3 begins on page 8.**

3 Victoria-Yeeland Logistics (Victoria) is a logistics support business, which operates a fleet of lorries to deliver packages of goods on behalf of its customers within the country of Yeeland. Victoria collects packages from its customers' manufacturing sites or from the customers' port of importation and delivers to the final user of the goods. The lorries are run and maintained from a set of depots spread throughout Yeeland.

The overall objective of Victoria is to maximise shareholder wealth. The delivery business in Yeeland is dominated by two international companies and one other domestic business and profit margins are extremely tight. The market is saturated by these large operators and a number of smaller operators. The cost base of Victoria is dominated by staff and fuel, with fuel prices being highly volatile in the last few years.

In order to improve performance measurement and management at Victoria, the chief financial officer (CFO) plans to use the balanced scorecard (BSC). However, she has been pulled away from this project in order to deal with an issue with refinancing the business' principal lending facility. The CFO has already identified some suitable metrics but needs you, as her assistant, to complete her work and address any potential questions which might arise when she makes her presentation on the BSC to the board. The CFO has completed the identification of metrics for three of the perspectives (Appendix 1) but has yet to complete the work on the metrics for the customer perspective. This should be done using the data given in Appendix 2.

Additionally, two issues have arisen in the reward management system at Victoria, one in relation to senior management and the other for operational managers. Currently, senior management gets a fixed salary supplemented by an annual bonus awarded by the board. Shareholders have been complaining that these bonuses are not suitable. The operational managers also get bonuses based on their performance as assessed by their management superiors. The operational managers are unhappy with the system. In order to address this, it has been suggested that they should be involved in bonus target setting as otherwise there is a sense of demotivation from such a system. The CFO wants an evaluation of this system of rewards in light of the introduction of the BSC and best practice.

Required:

- (a) Discuss how Victoria's success in the customer perspective may impact on the metrics given in the financial perspective.** (5 marks)
- (b) Recommend, with justification, and calculate a suitable performance metric for each customer perspective success factor. Comment on the problems of using customer complaints to measure whether packages are delivered safely and on time.** (11 marks)
- (c) Advise Victoria on the reward management issues outlined by the CFO.** (9 marks)

(25 marks)

Appendix 1

Financial perspective

(How do we appear to our shareholders?)

Return on capital employed

Profit margin

Revenue growth

Customer perspective

(How do we appear to our customers?)

Success factors:

Ability to meet customers' transport needs

Ability to deliver packages quickly

Ability to deliver packages on time

Ability to deliver packages safely

Internal process perspective

(What business processes must excel?)

Time taken to load and unload

Lorry capacity utilisation

Learning and growth perspective

(How do we sustain and improve our ability to grow?)

Leadership competence (qualitative judgement)

Training days per employee

Appendix 2

The process: A customer makes a transport request for a package to be collected and delivered to a given destination. The customer is supplied with a time window in which the delivery will occur. Packages are then loaded onto lorries and delivered according to a route specified by the depot's routing manager.

Total number of customer transport requests	610,000
Total number of packages transported	548,000
Total number of lorry journeys	73,000
Total package kilometres	65,760,000
Total package minutes	131,520,000
Number of delivery complaints from customers:	
from damaged packages	8,220
from late delivery (outside agreed time window)	21,920

Notes:

1. All figures are for the last financial year.
2. A package kilometre is defined as a kilometre travelled by one package.
3. A package minute is defined as a minute spent in transit by one package.

- 4 Beach Foods (Beach) is a family-owned business which has grown strongly over its 100 year history. The objective of the business is to maximise the family's wealth through their shareholdings. Beach has three divisions. It manufactures a variety of foods in two of the divisions: Beach Baby Foods (Baby) and Beach Chocolate Foods (Chocolate). Each of these divisions knows its own market and sets prices accordingly. The third division (R&D) researches new products on the instructions of the other divisions and is considered to be vital to the survival and growth of Beach. The board of Beach has been considering the impact of using a divisional structure and has come to you as a performance management consultant to ask for your advice.

There is disagreement at board level about the correct choice of divisional performance measure to be used in the two manufacturing divisions. Currently, the business uses EVATM but two directors have been questioning its value, complaining that it is complicated to understand. These directors have been promoting the use of either residual income (RI) or return on investment (ROI) as alternatives. The board wants to use the same measure for each division. As well as qualitatively evaluating these different measures, the board needs an assessment of the impact of a change in performance measure on their perception of these divisions' performance. Therefore, as an example, they require you to calculate and discuss the use of ROI and RI at Baby division, given the data in Appendix 1.

The chief executive officer (CEO) of Beach has engaged a business analyst to perform a study of the portfolio of manufacturing businesses which make up Beach. This has been completed in Appendix 2. The CEO wants your comments (based on the categorisation given in Appendix 2) on how this work will impact on the performance management of the divisions. Specifically, the CEO has asked for your recommendations on how to control each division; that is, whether each division should be treated as a cost/profit/investment centre and also, the appropriate management style to use for handling staff in each division. The CEO commented to you:

'I have heard of different approaches to the use of budget information in assessing performance: budget-constrained, profit-conscious and also a non-accounting style. I need to know how these approaches might apply to each division given your other comments.'

All of this work has been partly prompted by complaints from the divisional managers. The Chocolate divisional managers complain that they had to wait for a year to get approval to upgrade their main production line. This production line upgrade has reduced wastage and boosted Chocolate's profit margin by 10 percentage points. The Baby division has been very successful in using the ideas of the R&D division, although Baby's managers do complain about the recharging of R&D costs to their division. Head office managers are worried about Chocolate as it has seemed to be drifting recently with a lack of strategic direction. Chocolate's managers are considered to be good but possibly not sufficiently focused on what benefits Beach as a whole.

Required:

- (a) **Assess the use of EVATM as a divisional performance measure for the manufacturing divisions at Beach.** (8 marks)
- (b) **Using Appendix 1, calculate the ROI and RI for Baby and assess the impact of the assumptions made when calculating these metrics on the evaluation of the performance of this division and its management.** (7 marks)
- (c) **Provide justified recommendations for each division's control and management style as requested by the CEO.** (10 marks)

(25 marks)

Appendix 1

Figures from Beach management accounts for year ended 31 March:

Baby division	2015
	\$m
Revenue	220
Costs	
Divisional operating costs	121
R&D costs recharged	11
Allocated head office management fees	28
	<hr/>
Profit before tax	60
	<hr/>
Capital employed	424

Notes:

1. Baby launched a new product with a large publicity campaign during the year.
2. The notional cost of capital for Baby is estimated by the chief financial officer at 11%. WACC for Beach is 7.5%.
3. ROI for similar entities is 20%.
4. EVA™ for Baby is calculated as \$35m.

Appendix 2

Star Baby: Market growth 18% Relative market share 105%	Problem child
Cash cow Chocolate: Market growth 3% Relative market share 120%	Dog

Relative market share is the market share of the division compared to that of the market leader. If an organisation is a market leader, then its market share is compared to the next largest competitor.

Note: You may assume that the calculations and this categorisation are accurate.

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
 n = number of periods until payment

<i>Discount rate (r)</i>											
<i>Periods</i>											
(n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	1
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	2
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	3
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	4
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	5
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	6
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	7
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	8
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	9
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	10
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	11
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	12
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	13
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	14
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	15
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	1
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694	2
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579	3
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482	4
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402	5
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335	6
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279	7
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233	8
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194	9
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162	10
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135	11
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112	12
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093	13
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078	14
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
 n = number of periods

		<i>Discount rate (r)</i>									
<i>Periods</i>											
(n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	1
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	2
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	3
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	4
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	5
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	6
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	7
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	8
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	9
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	10
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	11
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	12
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103	13
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367	14
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606	15
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	1
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528	2
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106	3
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589	4
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991	5
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326	6
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605	7
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837	8
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031	9
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192	10
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327	11
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439	12
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533	13
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611	14
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675	15

End of Question Paper