

Basic- Module

Performance Management

Time allowed : 15 minutes for reading and planning
3 hours for writing

June 29 – 2025

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

The Accountancy & Audit Profession
Org. Council - Sudan

Paper F5

AAPOC

F5- Performance Management

Section (A)

This section consists of 25 questions. All questions are compulsory and must be attempted and every question bears 2 marks. Total available marks for this section are 50 marks

1. A company manufactures a product which requires 8 hours per unit of machine time.

Machine time is a bottleneck resource as there are only 20 machines which are available for 24 hours per day, 5 days per week.

The product has a selling price of SDG 260 per unit, direct material costs of SDG100 per unit, labour costs of SDG88 per unit and factory overhead costs of SDG40 per unit.

These costs are based on weekly production and sales of 300 units.

What is the throughput accounting ratio?

- a. 1.25
- b. 0.31
- c. 2.00
- d. 0.75

2. The main the characteristics of big data, known as the 3Vs, are:

- a) Volume, Variety, and volatility
- b) Volume, Variety, and verifiability
- c) Volume, Variety, and velocity
- d) Volume, Vulnerability, and vacancy

3. Cow Co has two divisions, A and B. Division A has limited skilled labour and is operating at full capacity making product Y. It has been asked to supply a different product, X, to division B.

Division B currently sources this product externally for SDG 1,150 per unit. The same grade of materials and labour is used in both products.

The cost cards for each product are shown below:

Product	Y (SDG)/unit	X (SDG)/unit
Selling price	1,000	-
Direct materials (SDG100 per kg)	400	350
Direct labour (SDG40 per hour)	200	300
Apportioned fixed overheads (SDG15 per hour)	60	90

Using an opportunity cost approach to transfer pricing, what is the minimum transfer price?

- a. SDG 600
- b. SDG 1,250
- c. SDG 1,050
- d. SDG 1,340

4. If the actual selling price is more than the budgeted selling price, then the selling price variance will be:

- a) Favorable
- b) Adverse
- c) Equalized
- d) Average

5. Jamu Factory manufactures and sells fast moving consumer Goods. The factory recently launched one of its products. The product is being sold in different shops across the country, the sales teams noticed that when they increase the selling price, then the number of units sold does not change in the same pattern of the price change. The demand on this new product can be classified as:

- a) Neutral
- b) Elastic
- c) Inelastic
- d) Fluctuated

6. Budgeting approach which uses the previous period's numbers as a basis for the new budgeting period is called:

- a) Double check budgeting
- b) Zero Based Budgeting
- c) Incremental (traditional) budgeting
- d) Justification budgeting

7. A cost which is already incurred or committed to be incurred is classified for decision making purposes as:
- a) Original cost
 - b) Historical cost
 - c) Sunk cost
 - d) Incremental
8. The selling price of product Zigma is set to be SDG 25,000 for each unit and sales for the coming year are expected to be 500 units. If the company requires a return of 15% in the coming year on its investment of SDG 25,000,000 in product Zigma, the target cost for each unit for the coming year is
- a) 14,500
 - b) 15,500
 - c) 16,500
 - d) 17,500
9. Which ONE of the following would serve to increase the Throughput Accounting Ratio?
- a) An increase in the speed of the fastest machine in the production process
 - b) An unexpected increase in the factory rent
 - c) A 5% wage increase linked to an 8% improvement in productivity
 - d) A 10% sales discount to stimulate demand by 20%
10. Huron Ltd manufactures a product called the GL1. The GL1 requires five hours of machine time. Machine time is a bottleneck resource, as there are only four machines which are available eight hours a day, five days a week. Each GL1 sells for SDG 2,100 and has direct material costs of SDG 260 per unit, labour costs of SDG190 per unit and factory overhead costs of SDG 150 per unit. These costs are based on weekly production and sales of 150 units.

What is the throughput accounting ratio (to 2 decimal places)?

- a) 0.87
 - b) 1.15
 - c) 1.31
 - d) 2.62
11. Environmental costs are difficult to deal with for an accountant. Which of the following is not a reason for this?
- a) Costs are often hidden
 - b) Costs are mostly minor
 - c) Costs are often very long term
 - d) Accounting systems rarely split off these costs automatically

12. Which of the following terms would not normally be used to describe a relevant cost for a decision?

- a) Incremental
- b) Material
- c) Future
- d) Cash

13. The Contribution to Sales (CS) ratio for a business is 0.4 and its fixed costs are SDG1,600,000. Budget revenue has been set at 6 times the amount of the fixed costs.

What is the margin of safety % measured in revenue?

- a) 58.3%
- b) 58.7%
- c) 59.1%
- d) Cannot be determined without more information

14. A company manufactures and sells a single product with a variable cost per unit of SDG3,600. It has a contribution ratio of 25%. The company has weekly fixed costs of SDG1800,000.

What is the weekly breakeven point, in units?

- a) 1,500
- b) 1,600
- c) 1,800
- d) 2,000

15. If the demand for a product is 5,000 units when the price is SDG 4,000 and 6,000 units when price is SDG3,800, what is the optimal price to be charged in order to maximise profit if the variable cost of the product is SDG2,000?

- a) SDG 1,500
- b) SDG 2,000
- c) SDG 3,500
- d) SDG 7,000

16. The time for the first unit produced was 100 hours. The time for the second unit was 90 hours.

What is the learning rate?

- a) 95%
- b) 90%
- c) 89.1%
- d) 100%

17. The time for the first batch of 50 units was 500 hours. The total time for the first 16 batches of 50 units was 5,731 hours.

What is the learning rate?

- a) 85%
- b) 90%
- c) 92%
- d) 94%

18. Rawan has recently developed a new product. The nature of Rawan's work is repetitive, and it is usual for there to be an 80% learning effect when a new product is developed. The time taken for the first unit was 22 minutes. An 80% learning effect applies.

What is the time to be taken for the fourth unit in minutes?

- a) 17.6 minutes
- b) 14.08 minutes
- c) 15.45 minutes
- d) 9.98 minutes

19. Long-term sales forecasts are an example of accounting information used at which level of control in an organisation?

- a) Strategic planning
- b) Management control
- c) Tactical control
- d) Operational control

20. Which of the following sources of information would be considered internal?

- a) Interviewing potential customers
- b) Reading business magazines
- c) Receiving updates from tax authorities
- d) Looking through sales records for the last year

21. Strategic reports have many features, which of the following would be most likely true of a strategic report?

- a) Prepared regularly
- b) Normally considered accurate and reliable
- c) Highly summarised showing overall trends
- d) Demonstrates current position

22. The following are all types of controls required when generating and distributing commercially sensitive business information.

- 1) Passwords.
- 2) Audit trails.
- 3) Distribution lists.

Which of the above are examples of processing controls?

- a) (1) only
- b) (2) only
- c) (2) and (3)
- d) Both (1) and (3)

23. Hanu plc monitors the % of total sales that derives from products developed in the last year. Which part of the balanced scorecard would this measure be classified under?

- a) Financial perspective
- b) Customer perspective
- c) Internal perspective
- d) Learning perspective

24. Which of the following approaches to decision making is a risk-seeker approach?

- a) Maximin
- b) Minimax regret
- c) Expected value
- d) Maximax

25. Business unit that incurs costs and simultaneously generates revenue is classified for management accounting purposes as:

- a) Revenue center
- b) Cost center
- c) Profit center
- d) Management center

(Total: 25 marks)

Section (B)

This section consists of 2 questions. All questions are compulsory and must be attempted Every question bears 25 marks. Total available marks for this section are 50 marks

Question One:

Division X is in a stable market. The first draft of its plan for the next three years is regarded as unacceptable to group management because it shows a slow decline in profit and return on investment:

	Year 1	Year 2	Year 3
	SD Billion	SD Billion	SD Billion
Profit before interest and tax (PBIT)	3.0	2.7	2.4
Asset base (at beginning of year)	24	25	26

Proposals which may improve the situation in the next three years are being discussed; ONLY ONE can be accepted because of cash limitations. Projects are evaluated with a 10% required return on investment. These proposed projects are shown below.

(i) Special-purpose machine

Capital expenditure in years 1 and 2, followed by operating cash flow in year 3:

Year 1	Year 2	Year 3	NPV
SD Billion	SD Billion	SD Billion	SD Billion
-0.5	-0.5	2.0	0.634

(ii) R&D project

Revenue expenditure in years 1 and 2, followed by operating cash flow in year 3:

Year 1	Year 2	Year 3	NPV
SDGM	SDGM	SDGM	SDGM
-1.0	-1.0	4.0	1.269

(iii) Advertising

This can be done in each year if required. Each annual campaign costs SDG1 Billion, but produces additional contributions of SDG 0.4 Billion in the year of the campaign and SDG 1.1 Billion in the subsequent year. A decision has been made to run annual campaigns in years 1 and 2 only. The combined cash flows are:

Year 1	Year 2	Year 3	NPV
SDGM	SDGM	SDGM	SDGM
-0.6	+0.5	+1.1	0.694

Managers are currently evaluated on return on investment (ROI), and are paid bonuses when this reaches or exceeds 10%. At 10% ROI the manager of division X will receive 25% of his salary of SDG 50,000,000 pa. For each 1 % increase in ROI above 10%, and pro rata, he will receive an additional 2.5% of basic salary with an upper bonus limit of 50% of salary for that year. Thus, for the first draft of the plan, the bonus based on the ROI has been correctly calculated as:

	Year 1 SDG	Year 2 SDG	Year 3 SDG
Bonus	15,625,000	13,500,000	Zero

Calculations ignore tax and depreciation. The asset base represents the assets employed in the division at the beginning of each year, and excludes cash balances which are transferred to the group, and is used for the calculation of residual income (RI) and ROI.

Required:

1. Briefly discuss the main advantages of ROI as an investment appraisal technique
6 marks
2. Calculate the ROI, and division “X” manager’s bonus each year for the three alternative proposals.
12 marks
3. Comment on the potential effect of the bonus system on the manager’s choice of the project.
7 marks

Question Two

Glam Co is a tax consulting firm which provides both 'tax filing' and 'tax advisory' services to small business clients who trust Glam team to handle their tax files during the tax season requesting for tax filing and necessary advice to improve their tax position. All services are carried out by one of the firm's three senior tax advisors. The firm also has two assistants (trainees) and two advisors. Every client file attending the firm is first seen by an assistant, who reviews the client's tax information, summarises it and enter the data in the software; next, by a senior advisor, who prepares the tax draft return and discuss with the client the items which can be adjusted to optimize the tax position of the client (this part of work referred as "advisory service"); then finally, a junior advisor documents the tax advice provided by the senior advisor, revise the tax draft return accordingly and send the file for the final review and approval from the senior advisor so that a junior advisor can submit tax return on the tax authority portal. Although Glam uses software to prepare the tax returns, yet the team spends a considerable amount of time on the data entry, verification and reconciliation and senior advisors need to review and sign off all of the files including preparatory files and reconciliations.

The average length of time spent with each member of staff in the client file is as follows:

	Compliance Hour	Advisory Hour
Assistant/trainees	0.1	0.3
Senior Advisor	1.0	1.5
Junior Advisor	0.5	0.5

The firm operates for eight hours each day for six days per week. It is only closed for two weeks each year. Staff salaries are SDG400 billion each year for Senior Advisors, SDG280 billion each year for Junior Advisors and SDG120 billion each year for the Assistants/trainees. The cost of preparing and filing of tax return is SDG 6,000,000 per client's file. The cost of all additional tax advisory is SDG74,000,000 per client's file. Other firm's costs amount to SDG 1064 billion each year. Glam & Co charges SDG 600,000,000 for each Tax return filing and SDG 1,100,000,000 for advisory. The senior advisors' time has been correctly identified as the bottleneck activity limiting the company's revenue and profitability.

Required:

- Briefly explain why the senior advisors' time has been described as the 'bottleneck activity', supporting your answer with calculations. **(6 marks)**
- Calculate the throughput accounting ratio (TPAR) for 'tax filing' and the TPAR for 'tax advisory' assuming the bottleneck activity is fully utilised. **(10 marks)**
- Identify three recommendations and briefly discuss their practical implications that Glam can implement to remove the bottleneck caused by lack of time of senior advisor. **(9 marks)**

(Total: 25 marks)

Present Value Table

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

Where r = discount rate

n = number of periods until payment

		Discount rate (r)									
Periods (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

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