Ch. 1

The manager anal management accounting.

Accounting: an Information system which [Identify, record, comunicate] information abart [economic events] to invested users.
تبادل منفعة بين طرفين-عكس التعبير عنها بالنقود

*Management accounting: Measures, analyze and report financial and nonfinancial Information to help managers make dicisions. [لا يلزم أن تتوافق مع GAAP]

* Financial accounting: Reporting to external users [Banks, suppliers, Investors, creditors...]

*The difference between Financial and management accounting: [يلزم تتوافق مع GAAP]

	Financial accounting	Management accounting
Purpose of Information	To empact external Decision Users	To empact employee Behaviors
Primary users	For external users	For internal users
Focus and emphasis	Past-oriented [Financial information]	Future-oriented [Financial and nonfinancial Information]
Rule of mesurment and Reporting	GAAR or [IFRS مصنف] [Financial statements]	No Rules [based on cost-benefit analysis (كمية الفائدة)]
Time span	Annual Reporting (أقصر حد) ومكن شهريا أو كل نصف سنة أو كل 4 أشهر.	From 1 hour Report to 20 years Report.
Behavior Implication	External	Dicision makers

Management Accounting:

① Planing [Budgetting]: التخطيط ووضع الاستراتيجيات

② Controlling: تنفيذ الخطط و تقييمها و المقارنة بين الهدف و النتيجة

③ Five step decision making Process in planning and controlling:

① تحديد المشكلة
② جمع المعلومات
③ عمل توقعات
④ اتخاذ القرار
⑤ تطبيق القرار وتقييم الأداء

Institute of management accountants: معهد المحاسبين الاداريين

يصدر المعايير الأربعة للسلوك الأخلاقي للمحاسبين الإداريين

① Competence: الحفاظ على المهارة والمعرفة والكفاءة

② Confidentiality: الحفاظ على سرية المعلومات

③ Integrety: النزاهة (الابتعاد عن كل ما يؤدي للتقارب بالمصالح)

~~④ Credibility~~

④ Objectivity: الموضوعية وعدم التحيز

// RUBA MTOOR

Ch.2 ①

An Introduction To Cost Terms and Purposes

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+Cost: A sacrificed resource to achieve a spaeific objective.
↳ التضحية بموارد معينة (ملموسة/غير ملموسة) لتحقيق هدف معين.

+Cost Objective: Anything for which a cost measurement is desired.
↳ الشيء الذي مطلوب اوجد تكلفته.

+Actual Cost تكلفة فعلية / Budgeted Cost (مستقبلية) تكلفة متوقعة

+Cost Accumulation: The collection of cost data in an organized way by means of an accounting system. [جمع التكاليف المتعلقة بشيء معين]

+Cost Assignment: Term that encompasses the gathering of accumulated cost to a cost objective. [جمع التكاليف المتراكمة لعنصر التكلفة]
↳ Happend in 2 way:
① Tracing accumulated (تتبع التكاليف المتراكمة مع وجود علاقة مباشرة مع عنصر التكلفة)
(Cost tracing)
② Allocating accumulated (تتبع التكاليف المتراكمة دون وجود علاقة مباشرة مع عنصر التكلفة)
(Cost allocating)

+Direct and Indirect Cost:

Direct cost: تكاليف يمكن تتبعها بسهولة
Indirect cost: تكاليف غير مباشرة يتم حسابها بطرق عقلانية

+Factor affecting Direct/Indirect cost classification:
① The materiality of the cost [مقارنة بين التكلفة والجهد] ← الأهمية النسبية للتكلفة
② Technology [ممكن يتحول العامل من تكلفة مباشرة لغير مباشرة إذا حلت الآلات محله مثلاً]
③ The design of operation [تصميم العملية التشغيلية]

+Cost Behavior:
① variable cost (VC): يتناسب طردياً مع مستوى الانتاج
② Fixed cost (FC): لا يتأثر بمستوى الانتاج (لحد ما)
لفترة معينة [يعني الموضوع مش دايم وفي تكاليف] → Relevent range
* يتم تحديد سلوك التكلفة ثابتة بالطلب.

	Total amount	per unit
VC	↑ output = ↑ cost (علاقة طردية)	constant (ثابت)
FC	constant (ثابت)	↑ output = ↓ cost (علاقة عكسية)

*we shoulde use (TC) because unit costs Change with a different levele of output:

Exercise 1

Cost object → Manufactures office furniture.

Cost Tracing (C.T) (D.c) Cost allocation (C.A) (Not D.C) Nonmanufacturing (Non)

1. Carpenter wages : C.T (wages يعني مرتبط بوحدة زمن) → Direct Cost دائمًا
2. Dep. office building : Non (ممكن استعمل المكتب لأغراض تانية مش مرتبط بالتصنيع)
3. Glue for Assembly : C.A (Immaterial)
4. lathe department supervisor : C.A (لأنه صعب أحدد قد ايه القطعه قدرت بعدها وقت اشراف مع المشرف)
5. lathe dep. : C.A (unit of use إلا إذا حسابالاهلاك بطريقة دائمًا C.A)
6. lumber : C.T (المواد الخام)
7. lathe maintenance : C.A
8. lathe operator wages : C.T (wages)
9. sample for trade shows : Non (لأني صنعتها و خلصت)
10. metal brackets for drawers : C.A (Immaterial)
11. Factory washroom supplies : C.A

⇒ Plant / Factory / manufacturing لما يكون موجود في السؤال إذا أكيد الأشياء مش Non

Exercise 2

Direct cost (D) Indirect cost (In.D) Fixed (F) Variable (V)

1. Assembly line labor wages : D / V
2. plant manager wages : In.D/V → F إذا كانت salary بتغير
3. Dep. on the assembly lin equipment : In.D / F (V إذا يستعمل unit of use بتغير)
4. Component parts (مواد خام) for the product : D / V
5. wages of security personnel the factory : In.D / V

Scanned by TapScanner

Different type of Firms:

① Manufactoring Companies تقوم بتصنيع السلعة
② Merchandising companies تقوم بشراء السلعة ثم بيعها < retailers / wholsalers] tangable goods
③ Services companies تقوم بتقديم الخدمات] Intangable Products
↳ Service Revenue ← الربح فيها على شكل

① Balance sheet (Inventory

② Income statement

Merchandising comp.
- Inventory
- merchandising Inventory

Sales Revenue (S.R)
- Cost Of Good Sold (COGS)
Gross profit (G.P)

Manufactoring comp.
- Row material Inventory
- Work In Process Inv. (WIP)
- Finished good Inventory
Total Inventory

S.R
- COGS
G.P

*Manufactoring comp. (~~crossed out~~)
① Nonmanufactoring cost < selling cost / Administrativ Cost
*تكاليف لا ترتبط بالتصنيع بشكل مباشر

② Manufactoring Cost
→ Direct Material (D.M) مواد خام مباشرة
→ Direct Labor (D.L) عمالة بشكل مباشر
→ Manufactoring overhead (MOH) تكاليف عامة بالتصنيع
InDirect Material ← مثل زيت تشحيم الآلات
InDirect Labor ← مثل الحراسة والصيانة
All other Manufactoring Cost ← أخرى

Cost Flow:

Begining Direct Material (Beg. DM)
+ Purchases
-(Ending Direct Material Balance (End. DM)

Direct Material used in production
+ Direct Labor (DL)
+ Manufactoring overhead (MOH)

Total Manufactoring Cost
+ Bigining work In process Inventory (Beg. WIP Inv.)

Total work In Process Inventory (Total WIP Inv.)
-(Ending work In process Inventory)

Cost of Good Manufactoring
+ Begining Finished good Inventory

Total cost of Good available for sale (Total Finished Inventory)
-(Ending of good available for sale)

Cost Of Good Sold (COGS)

* Sales
-(COGS)

Gross Profit (G.P)
-(operating expenses)

Net Income (NI)

التكلفة الأولية
* Prime Cost (Direct Material + Direct Labor)

* Conversion cost (Direct Labor + MOH)

تكلفة التحويل (Direct Material → Finished good) خلال (WIP)

* Sales
-(Fixed cost) → لا يتأثر بزيادة الانتاج
-(variable cost) → علاقته طردية مع زيادة الانتاج
operating income

ex.1 : 2-36

- Direct materials inv. 1/10/2017 $105

⋮

① Direct materials inv. 31/10/2017 (Ending Balance)

B.B + Purchases - E.B = D.M used

105 + 365 - E.B = 385

E.B = $85

② Fixed MOH

Total MOH = Fixed MOH + Variable MOH

450 = Fixed MOH + 265

Fixed MOH = $185

③ D.L

D.L + DM used + MoH = Total manufactoring cost

D.L + 385 + 450 = 1,610

D.L = $775

④ work in process inv. 31/10/2017 (Ending WIP)

Total manufactoring cost + Beg WIP - Ending WIP = Cost of good manu

1,610 + 230 - Ending WIP = 1,660

Ending WIP = $ 180

⑤ Cost of finished goods.

cost of good manufactoring + Beg. finished good = Cost of finished good

1,660 + 130 = $1,790

⑥ Finished good inv. (Ending Balance)

Total cost of finished goods - E.B = COGS

1,790 - E.B = 1,770

E.B = $20

ex:.2

(B) D.M available for use

D.M available for use + (D.M inv (E.B)) = D.M ~~available for~~ used

B + − 37,000 = 255,000

B = $ 292,000

(A) D.M inv.

D.M. inv + D.M purchases = D.M available for use

A + 246,000 = 292,000

A = $ 46,000

(D) Total MOH

19,000 + 38,000 + 39,000

D = $96,000

(F) Total cost of WIP

Total cost of WIP - Ending WIP = Cost of good manufactur

F − 322,000 = 440,000

F = $ 762,000

(E) Total manufacturing cost

Total manufacturing cost + Beg. WIP = Total cost of WIP

E + 320,000 = 762,000

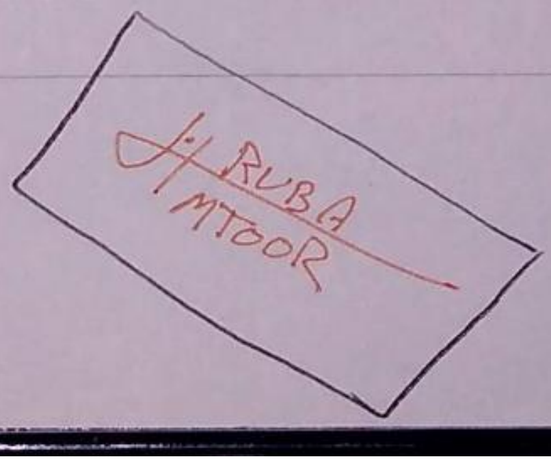
E = $ 442,000

(C) D.L

D.L + MOH + D.M used = Total manufacturing cost

C + 96,000 + 255,000 = 442,000

C = $ 91,000



Ch. 3

Cost - Volume - Profit Analysis

(CVP)

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→ what is CVP? → تصلح لكل أنواع الشركات
- خدماتية
- تجارية
- تصنيعه

→ مهم أعرف أحدد (Q)

Operating Income (الدخل التشغيلي) = Total Revenue − Total cost ← دراسة سلوك وعلاقة

Total Revenue (TR) − Total cost (TC) = Operating Income (OI)

$$TR - TC = OI$$

Total cost = Variable cost + Fixed cost

$$TC = VC + FC$$

* Selling price → P
Number of unit sold → Q

Variable cost = [Direct Material + Direct Labor + Variable Manufacturing overhead] + other variable costs

Variable manufacturing cost.

$$VC = DM + DL + V.MOH + \text{other } VC.$$

↳ يتأثر بحجم الانتاج

Fixed Cost = Fixed Manufacturing overhed + other Fixed Costs

FC = F. MOH + other FC

↳ withen Relevant Range ع الاتنا لا يتاثر بحجم

Example: Bookstore - selling GMAT textbooks

P = $ 200

vc/unit = $ 120

FC = $ 2,000

Q = 40 units

* Full apsorption costing Income statement (الطريقة اللي بنعرفها)

↳ مقبولة في GAAP ويتم تحضيرها لل External users

(CM. IS)

Contribution margin Income statement: (Variable Costing) ← لغرض التقارير داخل الشركة بتحضر

↳ غير مقبولة في GAAP لأنها لا تطبق Maching principle

CM. IS

Sales	200 x 40 →	8,000
(Variable costs)	(120 x 40) →	(4,800)
Contribiution margin	3,200 → (80 x 4) [200 - 120 = 80]	
(Fixed costs)	(2,000)	
operating Income	1,200	

$\therefore CM = Sales - VC \quad [\$3{,}200 = 8{,}000 - 4{,}800]$

$CM/unit = \frac{CM}{Q} \quad \left[\frac{3{,}200}{40} = 80\right]$.

or

$CM/unit = P - VC/unit \quad [200 - 120 = 80]$

لـ عند زيادة Q بمقدار 1 يصبح هناك 80$ لـ المساهمة في تغطية FC

$CM_{\%} = \frac{CM}{Sales} \times 100\% \quad \left[\frac{3{,}200}{8{,}000} \times 100\% = 40\%\right]$

or

$CM_{\%} = \frac{CM/unit}{P} \times 100\% \quad \left[\frac{80}{200} \times 100\% = 40\%\right]$

يعني كل 1$ من Sales يجيب 0.4$ CM و 0.6$ لتغطية FC

→ CUP Equation:

Rev. − VC − FC = OI

(P.Q) − (VC/unit . Q) − FC = OI

Q(P − VC/unit) − FC = OI ... (1)

Q . CM/unit − FC = OI ... (2)

$\therefore$ CM − FC = OI ... 3

Breakeven point (BEP)

لـ نقطة التعادل (لا ربح ولا خسارة)

$$Q(P - VC/unit) - FC = OI$$

$$Q(P - VC/unit) - FC = 0$$

$$Q(P - VC/unit) = FC$$

$$\therefore \underset{Q}{BEP} = \frac{FC}{CM/unit} \rightarrow \left[\frac{200}{80} = 25 \text{ unit}\right]$$

عند بيع 25 وحدة يكون فيه ربح ولا خسارة

$$\underset{(\$)}{BEP} = \underset{Q}{BEP} \times P \left[25 \times 200 = \$5,000\right]$$

or

$$\underset{(\$)}{BEP} = \frac{FC}{CM\%} \left[\frac{2,000}{40\%} = \$5,000\right]$$

* Target OI

$$\underset{(Q)}{Target} = \frac{FC + target\ OI}{CM/unit} \left[\frac{2,000 + 2,800}{80} = 60 \text{ unit}\right]$$

$$\underset{(\$)}{Target\ Revenue} = \underset{(Q)}{Target} \times P \left[60 \times 200 = \$12,000\right]$$

or

$$\underset{(\$)}{Target\ Revenue} = \frac{FC + Target\ OI}{CM\%} \left[\frac{2,000 + 2,800}{40\%} = \$12,000\right]$$

CVP and Income Tax

Net Income = Operating Income . (1 - tax Rate)

$$NI = OI \cdot (1 - \text{tax Rate})$$

$$OI = \frac{NI}{1 - \text{tax Rate}}$$

Tax Rate = 40% نريد $1,200 ← NI كم وحدة لازم أبيع عشان أحصل على

$$OI = \frac{1,200}{60\%} = \$2,000$$

$$\text{Target } Q = \frac{FC + \text{target } OI}{CM/\text{unit}} \left[\frac{2,000 + 2,000}{80} = 50 \text{ unit} \right]$$

$$\text{Target Revenue } (\$) = \text{Target } Q \cdot P \left[50 \cdot 200 = \$10,000 \right]$$

$$\text{or } \left[\frac{2000 + 2,000}{CM/\text{unit} \cdot P} \rightarrow \frac{4,000}{80/200} = 10,000 \right]$$

Status Que الوضع الحالي

P = $200
VC/unit = $120
CM/unit = $80
FC = $2,000
Q = 40 unit

↓

OI = 80 . 40 + -2,000
OI = $1,200

∴ Status Que

حالة أخرى

P = $200
VC/unit = $120
CM = $80
FC → $2,000
→ $500

Q ↑ 10%
∴ Q = 10% × 40 + 40
Q = 44 unit

↓

OI = 80 × 44 − 2,500
OI = $1,020

∴ أفضل

* عند أي سعر تستطيع الشركة بيع 50 وحدة إذا اشترتها $115 وكان OI = 1,200

OI = (P - VC/unit) Q − FC

1,200 = (P − 115) 50 − 2000

$\frac{3,200}{50}$ = P − 115 ⟶ P = $179

→ Sensitivity Analysis: تحليل الحساسية
↳ what if analysis [ماذا حدث وغيرنا إذا؟]

$$MOS_{Q} = Sales_{Q} - BEP_{Q} \quad [15 = 40 - 25]$$

$$MOS_{\$} = Sales_{\$} - BEP_{\$} \quad [3{,}000 = 8{,}000 - 5{,}000]$$

$$MOS_{\%} = \frac{MOS_{\$}}{Sales_{\$}} \times 100\% \quad \left[\frac{3{,}000}{8{,}000} = 37.5\%\right]$$

Sales can drop by 37.5 before we start losing

Cost Structure:

TC / VC / FC العلاقات بينه

نسبة ← VC/TC

FC/TC ← كل ما زادت يزيد الحيد علي لأنو إذا قلت المبيعات بتكون الخسارة كبيرة

Degree of Operating laverage (DOL)

OI ← يوضح أثر FC على

$$DOL = \frac{CM}{OI}$$ ⇒ تغير المبيعات زيادة أو نقصان يؤثر على OI اعتماداً على حجم FC [البسط والمقام الفرق بينهم FC]

مثلاً زادت المبيعات 10%

DOL X 10% = ↑ OI

لـ الزيادة في OI

ويصبح OI الجديد = $OI^{old} + \uparrow OI$

Multiple Product

لما الشركة تبيع ←

$$OI = (P - VC/unit)\,Q_1 + (P - VC/unit)\,Q_2 \;\ldots\; - FC$$

$$OI = \underset{Product_1}{CM/unit} + \underset{Product_2}{CM/unit} \;\ldots\; - FC$$

Sales mix يعبر عنه بالنسب Bundle حزمة

Example:

	Product 1	product 2
Sales Q	60	40 → Sales mix 3:2 بنسبة وتناسب
P	$200	$100
VC/unit	$120	$70

CM/unit
Product 1 = $80
Product 2 = $30

FC $4,500

OI = 80 x 60 + 30 x 40 − 4,500

OI = $1,500

$$CM/_{bundle} = CM_{Product_1} + CM_{Product_2}$$

$$= (Q \cdot CM/unit) + (Q \cdot CM/unit)$$

$$= 3 \times 80 + 2 \times 30$$

$$= \$300$$

$$BEP_{Q/bundle} = \frac{FC}{CM/bundle} = \frac{4,500}{300} = 15 \text{ bundle}$$

1 bundle → 3 product 1
→ 2 product 2

$\therefore$ $3 \times 15 = 45$ unit (product 1)
$2 \times 15 = 30$ unit (product 2)

$$BEP_{\$/bundle} = 45 \times 200 + 30 \times 100 \longrightarrow \$12,000$$

$$CM_{\%/bundle} \text{ or } = \frac{CM/bundle}{Sales/bundle} = \frac{300}{3 \times 200 + 2 \times 100} = 37.5\%$$

$$\therefore BEP = \frac{FC}{CM_{\%/bundle}} = \frac{4,500}{37.5\%} = \$12,000$$

Ch. 3

CUP Analysis موائين

① TR - TC = OI

② TC = FC + VC

③ VC = DM + DL + Variable MOH + other VC.

④ FC = Fixed MOH + other FC

⑤ CM/unit = P - VC/unit or CM/Q

⑥ CM = (P - VC/unit) Q or Sales - VC

⑦ $CM_{\%}$ = CM / Sales . 100% or $\frac{CM/unit}{P}$. 100%

⑧ CUP Equation:

* Q(P - VC/unit) - FC = OI

* Q . CM/unit - FC = OI

* CM - FC = OI

⑨ Breakeven point (BEP)

* $\underset{Q}{BEP} = \frac{FC}{CM/unit}$

* $\underset{(\$)}{BEP} = \underset{Q}{BEP} \cdot P$ or $\frac{FC}{CM\%}$

⑩ Target operating Income

$$\underset{(Q)}{\text{Target}} = \frac{FC + \text{target OI}}{CM/\text{unit}}$$

$$\underset{(\$)}{\text{Target Revenue}} = \underset{Q}{\text{Target}} \times P$$

or $$\frac{FC + \text{target OI}}{CM\%}$$

⑪ CUP and Income tax

$$OI = \frac{NI}{1 - \text{tax Rate}}$$

⑫ Margin of Safty (MOS)

* $\underset{(Q)}{MOS} = \underset{(Q)}{Sales} - \underset{(Q)}{BEP}$

* $\underset{(\$)}{MOS} = \underset{(\$)}{Sales} - \underset{(\$)}{BEP}$

* $\underset{(\%)}{MOS} = \frac{\underset{(\$)}{MOS}}{\underset{(\$)}{Sales}} \cdot 100\%$ or $\frac{\underset{(Q)}{MOS}}{\underset{(Q)}{Sales}}$

(13) Degree of Operating laverage (DOL)

* $DOL = \frac{CM}{OI}$

(OI ↑) OI الزيادة ←
(Sales ↑) Sales الزيادة ←

* $OI\uparrow = Sales\uparrow\% \cdot DOL$

* $New\ OI = old\ OI + OI\uparrow$

(14) Sales mix

[بسطرة] A : B : C لـ يُعبّر عنه بالسب

Bundle حزمة

$$OI = (CM/unit \cdot Q)_{Product_1} + (CM/unit \cdot Q)_{Product_2} \dots - FC$$

↳ For more 1 product

$$CM/_{bundle} = CM_{Product_1} + CM_{Product_2} \dots CM_{Product_n}$$

wher every $CM = CM/unit \cdot Q$

(15) BEP /bundle

* $BEP/_{bundle}\ (Q) = \frac{FC}{CM/bundle}$ ⟶ يوجد Q لكل Product حسب Sales mix

$$\underset{(\#)}{BEP}_{/bundle} = \left\{ \underset{(Q)}{BEP}_{/\cancel{bundle}\ Product} \cdot P \right.$$

↳ لكل منتج كال وبجمعهم

$$\text{or } \frac{FC}{\underset{(\%)}{CM}_{/bundle}}$$

$$\underset{(\%)}{BEP} = \frac{CM\ /bundle}{(Q_1 \cdot P_1) + (Q_2 \cdot P_2) \cdots + (Q_n \cdot P_n)}$$

* Contribution margin Income statement

Sales
(VC)
CM
(FC)
OI

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Ch.6 ①

Master Budget and Responsibility Accounting

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"موازنة"

Budget: Quantitaive plan for the future

- Financial
- Nonfinancial عدد وحدات الانتاج / عدد ساعات العمل

Budget → تكون للسنة القادمة

↳ Proforma Financial يعبر بعمل statement

"بيانات مالية متوقعة للفترات المستقبلية"

Historical F.S ← احنا متعودين نعمل

Budgeting Cycle:

"Fiscal year"

① قبل بداية السنة بجمع معلومات من الاداء بجميع مستوياتهم وبشوف البيانات والمعلومات السابقة عشان أحط خطة للمستقبل.

② Senior managers يعطوا إطار مرجعي عشان يقارنوا فيه النتيجة الفعلية

③ Managers and management accountants investigate any deviation from the plan → يتحققوا من أي انحراف عن الخطة

Performance Report

Advantages of Budget:

① Planning and coordination tool

← أداة تخطيط وتنسيق

② Control tool

← أداة رقابية

③ Motivation tool

← تعمل على تحفيز الجميع على الخطة

يكونوا متحمسين لتنفيذها.

2- Approaches to budgeting

① Top down budgeting

← الإدارة بتحضر الموازنة كاملة وتلزم الموظفين بتنفيذها.

② Bottom up (Participative) budgeting

← بشارك الموظفين في تحضير الموازنة مع الإدارة

← lower level employee

أفضل لأن الموظفين عندهم "day to day management" معرفة أكتر

لكن فيها Budget slack ← threat ممكن الموظفين يعطوا أقتراحات غير صحيحة عشان يربحوا العالم

↳ Overestimating cost ← زيادة التكاليف

↳ Underestimating Revenue ← تقليل الأرباح أو يضحكوا على الإدارة

Time Coverage of Budgets

← يتغطي الموازنة فترات مالية تتراوح بين شهر لسنة

Rolling "Continuous Budget" ← ممكن الشركة تستعمل طريقة
لعمل كل ما تخلص فترة مالية بليش في موازنة للبعدها خلال
لنفس السنة [يعني بتعمل موازنة وحدة لكل السنة]
مرة وحدة

Master Budget الموازنة الشاملة
تشمل ↳ Operating Budgets
↳ Financial Budgets

Basic operating Budgets

① Revenue Budget [الوحدات المراد بيعها × سعر البيع]
② Production Budget [الوحدات المراد انتاجها × تكلفة الانتاج]
③ DM usage Budget [عدد الوحدات المنتجة × تكلفة DM للوحدة]
④ Direct manufactoring labor Budget
⑤ D-MOH costs Budget
⑥ Ending Inventory Budget
⑦ COGS Budget
⑧ Operating exp. Budget
⑨ Budget Income statement

Income statement

Sales Revenue
(Cost of Good Sold) → Beg Inventory
(cost of Good purchased)
Cost of Good Available for Sale
(Ending Inventory)
Cost of Good sold

Gross profi
(Operating ~~Income~~ Expense)

Net Income / loss

Basic financial Budget:

1. Capital expenditure Budget
2. Cash Budget
3. Budgeted Balance sheet
4. Budgeted statement of cash flows.

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M TOOR

Ch.11

Decision Making and Relevant Information

RUBA MTOOR

[Alternatives] يعني انا بدي أعمل مقارنة بين أكثر من خيار

بناءً على معلومات ← نوعية (Qualitative)
                    ← كمية (Quantitative)

Relevent Analysis

في هذا الشابتر رح نتعلم نعمل
↳ Relevent Information حتى بقدر على
(معلومات ذات علاقة)
تؤثر في اتخاذ القرار ↓
- حدث في المستقبل
- تختلف من خيار لآخر

← لحتى تتوافر الصفتين لتكون المعلومة ذات علاقة

*Relevent Cost: تكاليف تحدث في المستقبل ← يعني انه تحدث
وتختلف من خيار لآخر

*Relevent Revenue: هي ايرادات يمكن حدوثها في المستقبل وتختلف من خيار لآخر

*Past Cost (historical Cost): (وصلت) تكاليف سابقة
← لا تعتبر معلومات ذات علاقة [لانو تؤثر في القرار]
← نسمي Sunk Cost (تكاليف غارقة) يعني حدثت وخلصت

Type of Information:

① Quantitative information: معلومات كمية
- Financial: مثل رواتب الموظفين
- Non-Financial: مثل عدد العمال/عدد ساعات العمل

② Qualitative information: معلومات نوعية

← هي بالضرورة جميع المعلومات اللي بتكون عشان تكون ذات علاقة (Relevant Information) لازم هي شرط تكون بتختلف من بديل لآخر

*Incremental Cost: التكلفة المرتبطة باتخاذ قرار ما

*Differential Cost: الفرق بين الخيارين في أي تكلفة ما
↳ إذا كان الفرق صفر إذاً المعلومة غير مرتبطة

Relevent Analysis → Alternativ 1
→ Alternative 2
→ Alternative X

interms of → Qualitative information
→ Quantitative information

↓

من خلال

[Contribution Margin Income statement]

Some types of Decisions that need Relevent Analysis:

① One-time-only special orders

② Insourcing vs. outsourcing (Make or Buy)

③ product mix with capacity constraints

④ Adding / dropping decision → Customer
→ Branch

→ Special orders : (SO) طلبات (عروض) خاصة
[or special offers]
→ Short-run decision

عن طريق ← يزيد (يقلل) ← Operating Income إذا ← ينقص
← يقل (يرفض)

Profitability لتحديد [التكاليف] ذات العلاقة مقارنة المعلومات

example:

P/unit = $3

DM	$1
DL	$0.45
V. MOH	$0.25
V. Marketing	$0.10
FC	$0.50
TC	$2.30

← طلبية خاصة ← Q = 5,000, P/unit = 2.25, No marketing cost

	Status Que (without SO)		with SO	
Sales	(40,000 x 3)	120,000	(40,000x3 + 5,000 x2.25)	131,250
(VC)				
-(DM) → RC		(40,000)	(45,000 x 1)	(45,000)
(DL) → RC		(18,000)	(45,000 x 0.45)	(20,250)
(V.MOH) → RC		(10,000)	(45,000 x 0.25)	(11,250)
(V. Marketing) → Not RC		(4,000)	(40,000 x 0.10)	(4,000)
CM		48,000		50,750
(FC) → Not RC		(20,000)		(20,000) ← لا تتأثر
OI		$ 28,000		$ 30,750

لأن الوحدات الجاد ما بدهم تكاليف اعلان

∴ زاد OI بمقدار $2,750 فبقبل ← اعتماداً على المعلومات اكالية فقط

→ lowest price should at leash cover the relevent cost (RC)
[1 + 0.45 + 0.25 = $1.70] ← يعني مجموع RC للوحدة الواحدة

* مش دائماً التكاليف المتغيرة بتكون ذات علاقة
* مش دائماً التكاليف الثابتة بتكون مش ذات علاقة
* مش دائماً التكاليف الثابتة ذات علاقة
  - عند تجاوز الطاقة الانتاجية بتكون التكاليف الثابتة ذات علاقة
  - يجب التعامل مع FC كـ Total ~ وليس FC/unit يعتبر Misledding

OI يؤدي لزيادة Incremental cost أعلى من
* اي سعر أعلى من التكاليف ذات العلاقة

(2) Insourcing Vs. Outsourcing (Make or Buy)

نختار الأقل لكل البدائل ~~Relevent~~ Relevent cosh نحسب

[↓ Cost : ↑ Profit]

في حالة الكلفة ← Avoidable costs (تكاليف يمكن تجنبها)

Unavoidable costs (تكاليف لا يمكن تجنبها)

*Opportunity Cost تكلفة الفرصة البديلة

→ Financial Accounting System لا يتم تسجيلها في

إما أن تضاف لتكاليف Make أو تطرح من تكاليف Buy

وليس كلاهما

← نفس الحالة السابقة بحل [CMIOS] لجميع البدائل وبناءً عليها يقرر مع الأخذ بعين الاعتبار تكلفة الفرصة البديلة والمعلومات الغير مالية [النوعية]

Example:

When 10,000 unit are Produced

He costs per unit:

DM	$ 0.60
DL	3.00
V.MOH	1.20
F.MOH	1.60
Total	$6.40

في عرض للشركة انها تبيع 10,000 وحدة بسعر 6# للوحدة الواحدة

Fixed cost ← [opportunity cost] $ 9,000 ←

[Avoidable Cost] $1.00 per unit ←

($1 x 10,000 = 10,000)

	Make	Buy
Purchase Cost	—	[10,000 x ₤6] $60,000
Making cost		
DM	6,000	← 100% from DM is avoidable
DL	30,000	
V.MOH	12,000	
FC ~~XXXX~~	16,000	1.6 يوفر = FC كل $0.6 يعادل $1 [10,000 x 0.6]
Total	$64,000	66,000
less: opportunity cost	—	(9,000)
Total Cost	$64,000	$ 57,000

Buy يقرر ∴ lowest Cost

③ Product Mix with Capacity Constraints

لما الشركة بتنتج أكثر من منتج فبضطر أختار أي منتج انتج اكثر حسب الطلب عالمنتجات والربح

→ Capacity Constraints
↳ محددات تؤثر على كمية الانتاج

تذكير → [CM / unit = P - VC]

← في هاي الحالة بكون عندي أساس جديد بتم أخذه بعين الاعتبار مثل: عدد العمال ....etc / hour

← بلزم احسب الربحية بناءً على هذا الأساس

CM / hour = (CM / unit) ~~×~~ Machine hour required per unit
↳ constraint resource   ↳ *قسمة

Example:

	Product A	Product B
P	$10	$30
VC	$6	~~$15~~ $15
CM/unit	$4	
Machine hour / unit	0.5 hour	3.0 hour
CM / hour	4 ~~×~~ 0.5 [8]	15/3 [5]

Total FC → $5,000

only 2,000 hour are available per period

① what is the optimal product mix? what is the max OI?

$8/h ← A يدر!

$5/h ← B يدر!

∴ يقرر انتج A

$\frac{2000}{0.5}$ = 4,000 unit From A and 0 unit From B

(A : B)

(4,000 : 0)

∴ OI = 4,000 x 10 + 0 x 15

OI = $40,000

(Q x CM/unit) → [FC]

OI = (4,000 x 10) + (0 x 15) − 5,000

OI = $11,000

② IF [Demand] of product A is limited to 2,500 unit, recalculate the optimal mix. ← محدد جديد

2,500 unit x 0.5 hour = 1,250

∴ 2,000 - 1,250 = 750 hour → B يعطيت للصنع

$\frac{750}{3}$ = 250 unit From B

(A : B)

∴ (2,500 : 250)

OI = (2,500 x 4) + (250 x 15) - 5000

OI = 18,750

← يعني لازم أعمل :

① أي المنتجات اكثر ربحية من ناحية [CM / Constraining Resource]

و بعدين Ranking [تصنيف]

② باخد المعدات اللي أعطاني إياها بعين الاعتبار، خ احتاب Max Allowed للمنتج الأكثر ربحية

③ خ كل مرحلة بحتب ~~[illegible]~~ ما يقدر عندي وبعدين استغلاله للمنتج الذي يليه خ الربحية

④ بكر (3/2) حسب عدد المنتجات اللي عندي

④ Add / Drop Decisions: [... قسم في الشركة، فرع، زبون] اضافة أو حذف

← بحدد كل التكاليف اللي موجودة عندي اذا بمكن تجنبها أو

[حسب طبيعة الحالة قد اشي بالمطلة.]

← Relevent (مؤثرة) بمكن تجنبها

← Irrelevent (غير مؤثرة) بمكن تجنبها

وبناءً على ذلك بقارنه الوضع الحالي بالبديل المطروح

← يعني بدرس التأثير على OI أو [Revenues vs Expenses خصم جميع]

operating loss

→ يوجد Revenues عند اضافة أو حذف القسم وبقارنه مع الايرادات الحالية

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Ch. 20

Inventory management, Just in time, and simplified costing method.

لـ إدارة المخزون - في الوقت المناسب - وطريقة مبسطة لحساب التكلفة.

Inventory management ← اللي بيهمنا

هدف الشركة تحافظ على البضاعة بأقل تكلفة ممكنة عشان تعظم أرباحها

Inventory management includes → planing التخطيط
→ coordinating التنسيق
→ controlling التحكم

Flow inventory ← بالمتغيرات المتغلقة

Costs related with Inventory

① Parchacing costs ← تكاليف الشراء ← أعلى تكلفة من التكاليف

← سعر البضاعة
← مصاريف شحن البضاعة
← مصاريف فحص البضاعة + التأمين

تكاليف الشراء أي تكاليف ضرورية لجعل البضاعة جاهزة للاستخدام

② Ordering Cost تكاليف إجراء الطلبية

- تكاليف متعلقة بالخدمات
- تكاليف الإجراءات القانونية.
- ~~[illegible]~~

تكاليف روتينية لإجراء الطلبيات

③ Carrying Cost تكاليف التخزين

لـ أي تكلفة يتكبدها الشركة عشان
تحافظ على البضاعة - وهي عندها -

لو بدها تلاجات مثلاً أو حراسة وتكاليف التخزين ~~[illegible]~~

opportunity cost تشمل +

④ Stockout Cost يعني ما تلبي طلبية وما تقدر الشركة تلبيها

- تكلفة الأرباح اللي خسرتها الشركة طالما ما قدرت تلبي الطلبية
- التكلفة الناتجة عن عدم الحفاظ على الزبائن.

~~[illegible]~~ (خسر الزبون طالما ألبي طلبه)

⑤ Cost of Quality تكلفة الجودة

لـ جميع تكاليف الحفاظ على الجودة

Ⓐ Prevention تكاليف تمنع وجود خراب أو خرده في البضاعة

مثل الصيانة الدورية.

Ⓑ Appraisal مصاريف فحص البضاعة

(C) Internal Failure مصاريف الاشكال اللي نتجت عندي
لي بعيني يوم يكون عندي spoilage يكون خسرت
كل اشي دفعته عليها ،

(D) External failure الخسائر الناتجة من بيع البضاعة اللي
فيها مشاكل - بعني وصلت البضاعة للزبون ومواصفاتها
ليست كما يجب - فبتضطر الشركة تتكبد تكاليف
لاسترداها + خسائر متعلقة بخسارة الزبون - سمعة الشركة -

(6) Shrinkage Cost تكلفة الانكماش

↳ المقصد بيه تكلفة البضاعة المسجلة ع الدفاتر
و تكلفة البضاعة الموجودة فعليا"
صممكن بسبب سرقة أو إساءة استخدام من قبل الموظفين
"embezzlement by employees" "theft"

→ The first step in managing Inventory for sale is
" The economic order quantity [EOQ]
↳ الكمية المثالية الواجب طلبها عند اجراء الطلبية
"optimal"

Basic EOQ Assumption
"فرضيات"

(1) There are only ordering and carring costs. إجراء الطلب وتكلفة الاحتفاظ بالمخزون
(1) بهتم فقط بتكلفة الشراء و

(2) The same Quantity is ordered at each reorder point. (2) كل مرة بشتري نفس الكمية

(3) Demand Purchase-order- lead time, ordering costs, and carrying cost are known with certainty.

طلب الزبائن على البضاعة و قدرتنا الطلبية بدها وقت
عشان توصلنا (آنا الشركة) وتكلفة اجراء الطلبية وتكلفة
التخزين كلها معروفة.

(4) Purchasing costs per unit are not affected by the Quantity ordered.

سعر الوحدة لا يتأثر بكمية الطلب (دائماً ثابت)

→ Purchasing cost irrelevent

(5) No stockouts cost.

لأنه يعني كل ما يجينا طلبية بقدر أبيعها.

(6) Managers consider the cost of Quality and Shrinkage costs only to the extent that these costs affect ~~ordering~~ ordering or carrying costs.

التكاليف الأخرى المتعلقة بإدارة المخزون بتكون
محسوبة ضمناً في تكلفة التخزين وإجراء الطلبية.

← الفرضيات من [1-6] ليست واقعية لكنها بتساعد
عشان أوصل لمعادلة [EOQ]

$$EOQ = \sqrt{\frac{2DP}{C}}$$

EOQ = Economic order Quantity الكمية المثالية

D = Demand per unit الكمية المطلوبة

P = Price per order سعر البضاعة

C = Carrying cost (Include opportunity Cost) تكلفة التخزين + تكلفة الفرصة البديلة

Example

Purchase 20,000 unit @ $1 per unit

opportunity cost

15% annual Rate of Return on Investment

Relevent carrying cost = 0.17 per unit

Relevent ordering cost per purchase order = ٤ 38.40

① $EOQ = \sqrt{\frac{2(20,000)(38.4)}{0.32}}$

$= \boxed{2191 \text{ unit}}$

$C = 0.17 + 0.15$

$= \$0.32$

② ~~# of orders = 2191 / 2000~~

$\#\text{ of orders} = \frac{\text{Annual Demand}}{EOQ} = \frac{20,000}{2191} = \boxed{9 \text{ orders}}$

② Total Annual relevant ordering cost

↳ # of orders X Price per order

9.128 ← 9 X 38.4 = $346

③ Annual relevant carrying costs

↳ $\frac{EOQ}{2} \times C = \frac{2191}{2} \times 0.32$

= $351

∴ Total Relevent cost = 346 + 351

= $697

④ Safety Stocks: [المخزون الإضافي] [قد يشاء لازم يكون عندك بضاعة احتياطية]

Safety stock = (Max demand − min demand) x lead Tim

lead time: وقت وصول البضاعة = half a month

reorder point كل قديش بطلب

Reorder point = lead tim X demand per lead time

Annual demand = في السؤال

20,000 ← الطلب في السنة

24 ← السنة 12 شهر

بعتبر 24 نصف شهر

∴ Reorder point = 834

Safety Stock = (Maximum demanad - minimum demanad) X leaad time

↳ مخزون بضاعة احتياطي

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26/30 v. good

Birzeit University

Faculty of Business and Economics

Acct. 333- Midterm Exam

Lecturer: Hind Muhtaseb **First Semester 2020/2021**

Student Name and No.:---1183223 - RUBA MTOOK

Multiple Choice Questions

D	1	D
C	2	C
B	3	C
A	4	D
A	5	A
A	6	A
D	7	D
C	8	C
C	9	C B
A	10	A
C	11	C
B	12	B
B	13	D
C	14	C
B	15	B
D	16	D
C	17	C
B	18	A B
A	19	A
C	20	C

17/20

9/10

QUESTION 1 (10 POINTS):

Piper Corporation's management has been reviewing the company's profitability and is attempting to improve performance through better planning. The company manufactures three products: L, M, and N. Selected per unit data on these products follow:

	Product L	Product M	Product N
Selling price	$19	$30	$20
Variable Manufacturing	7	19	13
Variable marketing	1	2	1
Machining time required per hour	1 hour	0.50 hour	0.25 hour

The machining time is limited to 200 hours per month. The company's fixed costs are $1,500 per month. Assuming that the number of units that can be sold of each product is limited to 500 units of L, 350 units of M, and 400 units of N.

Required:

a- Compute the contribution margin per machine hour for each of the three products

CM/unit = P - VC/unit

Product L (A - 8) $11 → $11

Product M (30 - 21) $9 → $18

Product N (20 - 14) $6 → $24

CM/unit

CM/machine hour

b- What product or product combination (in quantities) must be sold to obtain a maximum profit?

Total capacity → 200 hours/mount

Product

~~[illegible]~~

N → 400 x 0.25 = 100

M → 350 x 0.5 = 175 X] 200 x 0.5 = 100

∴ [400 unit Product N , 200 unit product M and no unint ~~P~~ product L]

c- What is the maximum profit obtainable assuming unlimited demand?

800 x 0.25 = 200

→ Product N

800 x $6 = $4,800

↳ Max profit

— F.C.

QUESTION 2: CHOOSE THE CORRECT ANSWER AND FILL UP YOUR ANSWERS ON THE ANSWER SHEET ABOVE (20 POINTS)

1. **Financial accounting _____.**
   A. focuses on estimating future revenues, costs, and other measures to forecast activities and their results
   B. provides information about the company as a whole
   C. reports information that has occurred in the past that is verifiable and reliable
   D. both b and c

2. **Which of the following is/are a characteristic of managerial accounting?**
   A. cannot be applied in service organization
   B. must follow GAAP
   C. emphasis on relevance of data, rather than precision
   D. both a and c above

3. **Werth Company produces tie racks. The estimated fixed costs for the year are $288,000, and the estimated variable costs per unit are $14. Werth expects to produce and sell 60,000 units at a price of $20 per unit. By how much can sales revenue drop before Werth incurs a loss?**
   A. $12,000
   B. $240,000
   C. $72,000
   D. $360,000

   FC = 288,000
   vc/unit = 14
   Q = 60,000 unit
   P = 120
   360,000
   Sale 1,200,000
   VC 840,000
   CM 360,000
   FC 288,000
   72,000

4. **When evaluating a make-or-buy decision, which of the following needs to be considered?**
   A. alternative uses of the production capacity
   B. the original cost of the production equipment
   C. pension costs to the current employees
   D. material-handling costs that cannot be eliminated

5. **Which of the following is true of an opportunity cost?**
   A. it is the income foregone by not using a resource in an alternative way.
   B. the higher the opportunity costs, the lower is the relevant cost.
   C. it is recorded as an expense in the accounting records.
   D. it is an unavoidable cost that cannot be changed no matter what action is taken.

6. **Hermantic, Inc. can produce 100 units of a component part with the following costs:**

Direct Materials	*$30,000*
Direct Labor	*13,000*
Variable Overhead	*32,000*
Fixed Overhead	*22,000*
	97,000

   88,000
   10,000
   98,000

   If Hermantic, Inc. can purchase the component part externally for $88,000 and only $12,000 of the fixed costs can be avoided, what is the correct make or buy decision?
   A. Make and save $1,000
   B. Buy and save $1,000
   C. Make and save $5,000
   D. Buy and save $13,000

7. **Which of the following is /are false of historical costs?**
   A. they are used for decision making.

B. they are always accounted as opportunity costs.
C. they cannot be fixed costs.
D. all of the above false.

8. **Zephram Corporation has a plant capacity of 200,000 units per month. Unit costs at capacity are:**

Direct materials	$4.00
Direct labor	6.00
Variable overhead	3.00
Fixed overhead	1.00
Marketing—fixed	7.00
Marketing variable	3.60

Current monthly sales are 190,000 units at $30.00 each. Q, Inc., has contacted Zephram Corporation about purchasing 2,000 units at $24.00 each. Current sales would not be affected by the one-time-only special order. What is Zephram's change in operating profits if the one-time-only special order is accepted?

A. $14,800 increase
B. $17,200 increase
C. $22,000 increase
D. $33,200 increase

9. **Rambo Company has three products, A, B, and C. The following information is available:**

	Product A	Product B	Product C
Sales	$60,000	$90,000	$24,000
Variable costs	36,000	48,000	15,000
Contribution margin	24,000	42,000	9,000
Fixed costs:			
Avoidable	6,000	15,000	4,000
Unavoidable	7,000	2,000	5,400
Operating income	$ 11,000	$18,000	$ (400)

Rambo Company is thinking of dropping Product C because it is reporting a loss. Assuming Rambo drops Product C and does NOT replace it, operating income will _____.

A. increase by $400
B. increase by $4,000
C. decrease by $5,000
D. decrease by $9,400

10. **If a company had a contribution margin of $200,000 and a contribution margin ratio of 40%, total variable costs must have been**

A. $300,000.
B. $120,000.
C. $500,000.
D. $80,000.

11. **How much sales are required to earn a target net income of $80,000 if total fixed costs are $100,000 and the contribution margin ratio is 40%?**

A. $250,000.
B. $405,000.
C. $450,000.

D. $200,000.

12. Reese Company requires sales of $2,000,000 to cover its fixed costs of $900,000 and to earn net income of $400,000. What percent are variable costs of sales?

A. 20%.
B. 35%.
C. 45%.
D. 65%.

2,000,000 − 900,000 − X = 400,000

X = 700,000

2,000,000 (1) — X — (700,000) — 400,000

13. A company with an operating income of $68,000 and a contribution margin ratio of 54% has a margin of safety of:

A. $36,720.
B. $125,925.
C. $147,826.
D. It is not possible to determine the margin of safety from the information provided.

MOS ($) = Sales ($) − BEP ($)

CM / Sales = 0.54

14. Barkley Company sells two products with the following per unit data:

	Standard	*Deluxe*
Selling price/unit	*$75*	*$120*
Variable costs/unit	*45*	*60*
Contribution margin/unit	*$30*	*$ 60*
Sales mix	*3*	*2*

If fixed costs are $630,000, the number of standard and deluxe units that Barkley must sell to break even is

BEP = FC / CM/unit = 630,000 / 210

(3 × 30 + 2 × 60)

A. 1,800 standard and 1,200 deluxe.
B. 3,600 standard and 2,400 deluxe.
C. 9,000 standard and 6,000 deluxe.
D. 21,000 standard and 14,000 deluxe.

Sales (UC) / CM (FC) ↑ / OI

15. When a greater proportion of costs are fixed costs, then _____.

A. a small increase in sales results in a small decrease in operating income
B. when demand is low the risk of loss is high
C. a decrease in sales reduces the total fixed cost per unit
D. a decrease in sales reduces the cost per unit

16. If a company has a degree of operating leverage of 3.0 and sales increase by 25%, then _____.

A. total fixed costs will increase by 75%
B. total costs will increase by 75%
C. profit will increase by 30%
D. profit will increase by 75%

17. Which of the following costs always differ among future alternatives?

A. fixed costs
B. historical costs
C. relevant costs
D. variable costs

18. Quantitative factors _____.

A. include financial information, but not nonfinancial information
B. can be expressed in monetary terms
C. are always relevant when making decisions
D. include employee morale

19. Which of the following costs is NOT considered to calculate the minimum acceptable price of a one-time-only special order?

A. marketing costs
B. direct material costs
C. indirect material costs
D. special design costs

20. Piels Corporation produces a part that is used in the manufacture of one of its products. The costs associated with the production of 10,000 units of this part are as follows:

Direct materials	*$ 90,000*
Direct labor	*130,000*
Variable factory overhead	*60,000*
Fixed factory overhead	*140,000*
Total costs	*$420,000*

Q = 10,000 units

Of the fixed factory overhead costs, $60,000 is avoidable.

Assuming no other use of their facilities, the highest price that Piels should be willing to pay for 10,000 units of the part is _____.

A. $420,000
B. $280,000
C. $340,000
D. $360,000

14

NAME AND NO. 1183223 - RUBA MTOOR ACCT 333 QUIZ/ CHAPTER 21

QUESTION 1: TRUE/ FALSE

1. Capital budgeting is the process of making long-run planning decisions for investments in projects. T

2. The Required Rate of Return (RRR) is set externally by creditors as the interest rate on long term liabilities. F

3. The internal rate of return for a project is the discount rate that makes the net present value of the project equal to zero. T

4. The present value of an amount to be received in the future will always be more than the actual amount to be received in the future. F

8

5. Depreciation itself is not a cash flow, but it reduces the amount of taxes that a company must pay. T

6. The payback period method ignores cash flows that occur after the payback period. T

7. Relevant cash flows are expected future cash flows that differ among the alternative uses of investment funds. T

8. In calculating the net initial investment cash flows, any increase in working capital required for the project should be included. T

6

QUESTION 2: MULTIPLE CHOICE QUESTIONS

1. The payback period is criticized because:

A. It is difficult to apply

B. It ignores the time value of money

C. It is difficult to understand conceptually

D. All of the above

2. **The minimum annual acceptable rate of return on an investment is the _____.**

A. accrual accounting rate of return

B. required rate of return

C. internal rate of return

D. net present value

3. **The Virginia Company invested in a four-year project at an expected rate of return (discount rate) of 10%. Additional information on the project is as follows:**

Year	Net cash inflow	Present value of $1 at 10%	
1	$4,000	.909	3,636
2	4,400	.826	3,634
3	4,800	.751	3,605
4	5,200	.683	3,552

What was the amount of the original investment assuming a negative NPV of $1,000? (Round to nearest dollar)

1000 = 14,427 − x

A. $17,430

B. $15,427

C. $14,427

D. $13,427

4. The net present value method of capital budgeting is preferred over the internal rate-of-return method because _____.

A. the net present value method is expressed as a percentage of initial investment

B. the net present values of individual projects can be added to determine the effects of accepting a combination of projects

C. the percentage return computed under the net present value method is very easy to compare.

D. the calculation under the net present value method is easy as it does not use time value of money

5. Malive Park Department is considering a new capital investment. The following information is available on the investment. The cost of the machine will be $119,000. The annual cost savings if the new machine is acquired will be $35,000. The machine will have a 5-year life, at which time the terminal disposal value is expected to be zero. Malive Park is assuming no tax consequences. Malive Park has a 12% required rate of return. What is the payback period for the investment?

4.

3.4

A. 4.2 years

B. 3.4 years

C. 5 years

D. 6.8 years

6. AARR indicates the average rate at which _____.

A. a dollar of investment generates after-tax operating income

B. a dollar of after-tax cash flow generates net income

C. a dollar of investment generates a positive cash flow

D. a dollar of after-tax non-operating income generates net income

7. Which of the following is a component of net-initial-investment cash flows?

A. original cost of an old equipment

B. cash outflow to purchase a new equipment

C. depreciation cost

D. after-tax cash flow from operations

8. The Golden Shades Corporation disposes a capital asset with an original cost of $280,000 and accumulated depreciation of $160,000 for a salvage price of $50,000. Silver Shades's tax rate is 40%. Calculate the after-tax cash inflow from the disposal of the capital asset.

A. $28,000

B. $70,000

C. $50,000

D. $78,000

BV = 280,000 - 160,000

120,000 = BV

$ 70,000 : loss

9. The Venoid Corporation has an annual cash inflow from operations from its investment in a capital asset of $16,000 each year for six years. The corporation's income tax rate is 30%. Calculate the total after-tax cash inflow from operations for six years.

A. $96,000

B. $67,200

C. $28,800

D. $16,000

STUDENT NAME AND NO. 1183223 - Ruba Mtoor

ACCT 333/ QUIZ IN CHAPTER 3

QUESTON 1: CHOOSE THE CORRECT ANSWER

1. All else being equal, an increase in advertising expenditures will _____.
   a. reduce operating income
   b. reduce contribution margin
   c. increase variable costs
   d. increase selling price

13/15

2. Which of the following is *not* an assumption of cost-volume-profit analysis?
   a. The time value of money is incorporated in the analysis.
   b. Costs can be classified into variable and fixed components.
   c. The behavior of revenues and expenses is accurately portrayed as linear over the relevant range.
   d. The number of output units is the only driver.

Questions 3 through 5 are based on the following data.

Tee Times, Inc. produces and sells the finest quality golf clubs in all of Clay County. The company expects the following revenues and costs in 2020 for its Elite Quality golf club sets:

Revenues (400 sets sold @ $600 per set)	*$240,000*
Variable costs	*160,000*
Fixed costs	*50,000*

3. How many sets of clubs must be sold for Tee Times, Inc. to reach their breakeven point?
   a. 400
   b. 250
   c. 200
   d. 150

$BEP_Q = \frac{FC}{CM/unit} = \frac{50{,}000}{200} = 250$ unit

4. How many sets of clubs must be sold to earn a target operating income of $90,000?
   a. 700
   b. 500
   c. 400
   d. 300

$Target_Q = \frac{50{,}000 + 90{,}000}{200}$

5. What amount of sales must Tee Times, Inc. have to earn a target net income of $63,000 if they have a tax rate of 30%?
   a. $489,000
   b. $429,000
   c. $420,000

$Target_Q = 565$

565×600

$OI = \frac{63{,}000}{70\%}$

$target_Q = \frac{90{,}000 + 50{,}000}{200}$

d. $300,000

6. A company that sells many different types of products should approach C-V-P analysis by assuming that
   a. all products will have the same contribution margin ratio.
   b. products will be sold in a constant mix.
   c. they should calculate a separate break-even calculation for each item.
   d. they will sell equal amounts of each item.

7. In a company with low operating leverage, _____.
   a. fixed costs are more than the contribution margin
   b. contribution margin and operating income are inversely related
   c. there is a higher possibility of net loss than a higher-leveraged firm
   d. less risk is assumed than in a highly leveraged firm

Use the following information for questions 8 and 9.

LSB Company has the following income statement:

Revenues	*$100,000*
Variable Costs	*40,000*
Contribution Margin	*60,000*
Fixed Costs	*30,000*
Operating Income	*30,000*

8. What is LSB's Degree of operating leverage (DOL)?
   a. 3.33
   b. 2.00
   c. 0.50
   d. 1.00

9. If LSB's sales increase by $20,000, what will be the company's operating profit?
   a. $42,000
   b. $12,000
   c. $50,000
   d. $30,000

10. Stones Manufacturing sells a marble slab for $1,100. Fixed costs are $33,000, while the variable costs are $550 per slab. The company currently plans to sell 210 slabs this month. What is the margin of safety (in dollars) assuming 85 slabs are actually sold?
    a. $165,000
    b. $49,500

c. $27,500
d. $33,000

QUESTION 2: TRUE/ FALSE

8. If the contribution margin ratio is 40%, it means that every $1.00 of sales will contribute $0.40 to covering fixed costs and generating a profit. T

9. Contribution margin ratio is generally the same as gross margin ratio. F

10. When performing cost volume profit analysis with multiple products, it is important to assume the sales mix remains constant. T

11. At the breakeven point, total fixed expenses equal total contribution margin. T

12. Total variable costs change in direct response to changes in volume or activity. T