

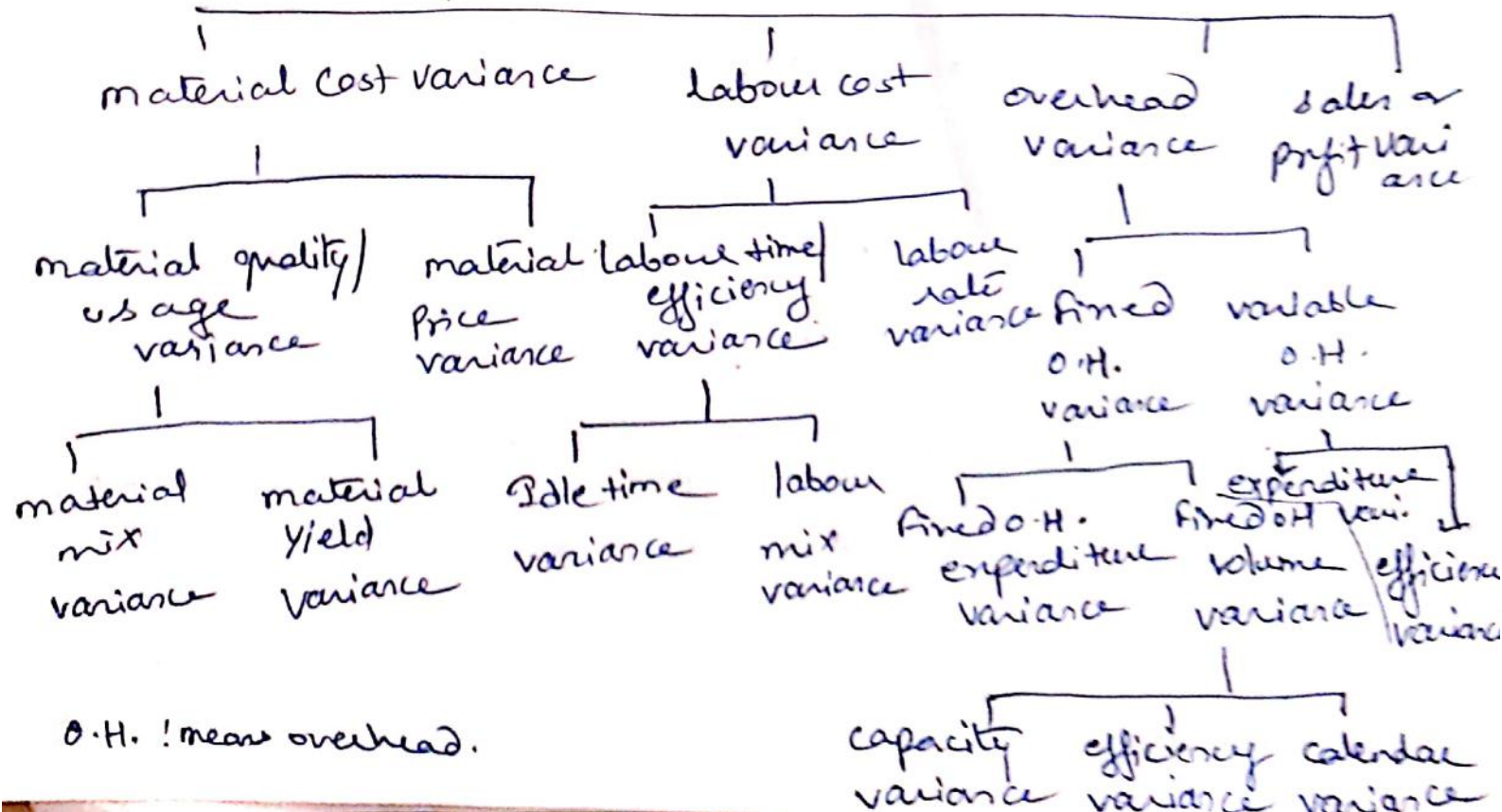
PAPER - I : Accounting for Managerial Decision
Unit 15 Variance Analysis.

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Meaning of variance - The deviations between standard cost, profit or sales and actual cost profit or sale respectively is called variance. Simply put variance is deviations of actual results from set standards.

- variance may be favourable or unfavourable
- variance can be controllable or uncontrollable
- when responsibility of a particular person can be fixed in respect to variance it is called controllable variance.
- when variance arises due to outside factors it is called uncontrollable variance.

Kinds of variance



① Labour cost variance → Also known as direct wage variance. It arises due to change in either wage rate or in time or both.

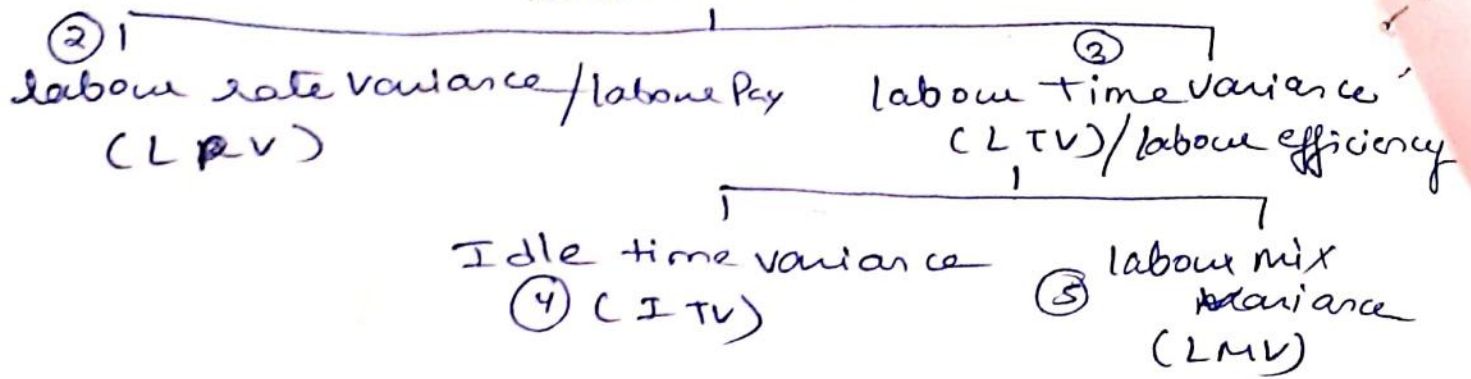
② ~~Labour rate~~ / wage rate / Labour pay variance → arises due to (a) change in basic wage rate or piece wage rate
(b) employing persons of different grade than specified
(c) Payment of more overtime
(d) Paid different rates than std. rates
(e) different rate paid for seasonal works or excessive work load.

③ Labour efficiency or labour time variance - difference between std. labour hours specified and actual labour hours spent. It arises due to
(a) lack of supervision (b) defective machineries
(c) Insufficient training & instructions
(d) more labour turnover (e) Bad working condition
(f) use of non standard materials (g) discontent labours

④ Idle time variance → It is std. cost of actual time paid to the workers for which they have not worked due to abnormal reasons. It should be segregated from labour efficiency variance otherwise it will show inefficiency on parts of workers though they are not responsible for it.

⑤ Labour mix / Gang composition variance → The change in labour composition may be caused due to shortage of one grade labour necessitating the employment of other grade labourers.

Labour Cost Variances (LCV) ①



① LCV = std. labour cost - Actual labour cost
 $\Rightarrow (\text{std. time} \times \text{std. wage rate}) - (\text{Actual time} \times \text{Actual wage rate})$

② LRV = Actual time (std. rate - Actual rate)

③ LTV = std. wage rate (std. time - Actual time)

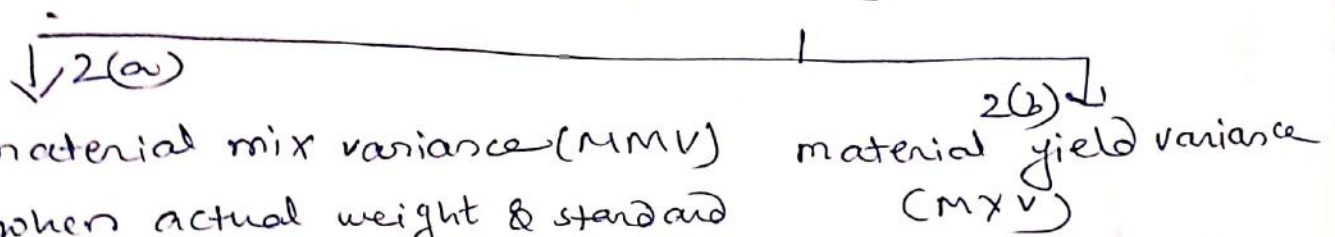
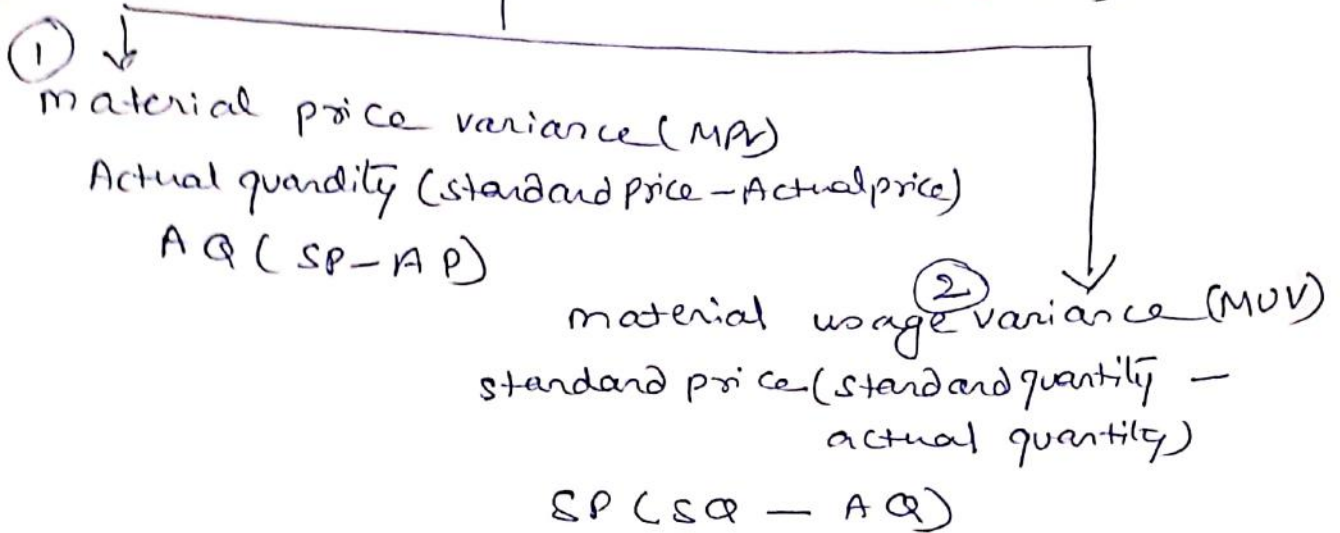
④ ITV = Idle hours \times std. Rate

⑤ labour mix / Gang composition variance
 (a) when std. & actual time of labour mix are same
 std. cost of std. labour mix - std. cost of actual labour mix

(b) when std. & actual time of labour mix are different

$$\left[\left(\frac{\text{Total time of Actual labour mix}}{\text{Total time of std. labour mix}} \times \text{std. cost of std. labour mix} \right) - (\text{std. cost of Actual labour mix}) \right]$$

MATERIAL COST VARIANCE/
DIRECT MATERIAL VARIANCE (MCOV)



(i) when actual weight & standard weight of mix are equal
(Standard price x standard quantity) - (Standard price x Actual quantity)
ie. $(SP \times SQ) - (SP \times AQ)$
OR $SP (SQ - AQ)$

Standard Rate (Actual yield - standard yield)
S.R. = $\frac{\text{Standard cost of standard mix}}{\text{Net standard output}}$
ie. (Gross output - standard loss)

(ii) when actual weight and standard weight of mix are different
 $\left\{ \frac{\text{Total weight of Actual mix}}{\text{Total weight of std. mix}} \times \text{std. cost of } \right\}$
 $\left\{ \text{std. mix} \right\}$
- (Standard cost of actual mix)

The following equations can be used for verification of material cost variance

①
 $MCOV = MPV + MOV$

2a 2b
 $MOV = MMV + MYV$

$MCOV = MPV + MMV + MYV$

- ① Material Cost Variance (MCV) = difference between standard material cost and actual material cost. It arises due to change in price of materials and variations in use.
- ② Material price variance (MPV) = It is difference due to standard price specified & actual price paid. It arises due to -
 - ① changes in price of materials
 - ② failure to secure discount on purchases
 - ③ failure to purchase on proper time
 - ④ not taking cash discount when settling standards.
- ③ Material Usage Variance (MUV) = It is difference between standard quantity specified and actual quantity of material used. It arises due to
 - ① negligence & wastage in use
 - ② defective production
 - ③ use of different material mix
 - ④ defective production
- ④ Material mix variance (MMV) - It arises due to change in standard and actual composition of the mix. It may be because -
 - ① material used in production is of higher price and will need in production is of cheaper material in larger quantity or use of cheaper material in large proportions.
- ⑤ Material yield variance (MYV) - A standard output is expected from the raw material put in it. The actual yield may be more or less than the specified standard. If actual yield is more than standard yield it is sign of efficiency.