PrevPlan – DS

NOTATION:

- **Good response:** All points of the question
- **Case of multiple responses:** Points as prorate of the number of good responses (Ex. The number of good responses is 2 from 4 possible responses for a question with 1 point. Each good response permit to obtain 0.5 points per responses. In opposite, if 3 responses were chosen, the 2 good responses permit to obtain 0.33 points per good response.)
- **No response:** -50% of points of the question
- **Bad response:** -25% of points of the question

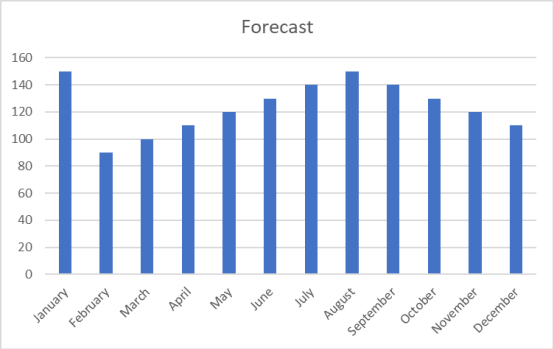
1. What are the differences between MRP and MRP2?

A	B	C	D	E
No Difference	Management perimeter	M mean Material vs M mean Manufacturing	R mean Requirements vs R mean Resource	P mean Process vs P mean Planning

2. Master Planning is …

A	B	C	D	E
A strategical level data	A tactical level data	An operational level data	A prerequisite for requirement calculation	A prerequisite for S&OP

3. Considering the graph below, what type of profile the forecast seems to be?



A	B	C	D	E
Consistent	Trendy	Seasonal	Trendy and Seasonal	None

4. What is the ONE MAIN purpose of “PrevPlan”?

A	B	C	D
Knowing how to calculate sales forecasts	Knowing how to implement a Layout	Using Divalto	Other answer

5. What is a BOM?

A	B	C	D
A description of the process, step by step	A list of components	A key performance indicator	A technical data, useful for the net requirement calculation

6. What is the delay in net requirement calculation schedule?

A	B	C	D	E
The number of periods to obtain the product	The number of periods between the requirement and the launched order	The time required to make the calculation	Nothing	The total duration of the schedule

7. With a BOM of several levels of components, with must take care of the requirements coming from all levels of materials.

A	B
True	False

8. Which of the following formulas represent the capacity used rate of a system?

A	B	C	D	E
$\partial = \frac{a}{CT}$	$\partial = \frac{a}{b}$	$\partial = \frac{a}{b} \times CT$	$\partial = a \times CT$	None

9. Which of the following formulas represent the average number of pieces in progress?

A	B	C	D	E
$WIP = \frac{\partial}{1+a}$	$WIP = \frac{\partial}{1-b}$	$WIP = \frac{\partial}{a-b}$	$WIP = \frac{\partial}{b-a}$	None

10. In Just In Time production, it's not recommended to overload the system to decrease the cycle time.

A	B
True	False

11. What is the most evolved methodology of forecasting?

A	B	C	D
Statistical abstraction	Machine learning	Demand planning	Darwin modelling

12. What basic approaches would you pick to forecast the sales of calendars?

A	B	C	D	E
Quantitative	Iterative	Contemplative	Qualitative	Temporal

13. In Just In Time production, it's not recommended to overload the system to decrease the cycle time.

A	B
True	False

14. Which of the followings theories is used to identify the capacity of a workstation?

A	B	C	D	E
The quantum theory	The queuing theory	The big bang theory	The endosymbiotic theory	None

15. Which of the following types of orders are used for the Net Requirements calculation?

A	B	C	D	E
Firm Orders	Launched Orders	Proposed Orders	Sales Orders	None

16. In MRP2, what is the order of different tools for planification from the general one to the most detailed?

A	B	C	D
- Sales and Operations Planning - Master Planning - Strategy Plan - Requirements Calculation - Workshop Management	- Strategy Plan - Sales and Operations Planning - Master Planning - Requirements Calculation - Workshop Management	- Workshop Management - Requirements Calculation - Strategy Plan - Sales and Operations Planning - Master Planning	- Strategy Plan - Requirements Calculation - Sales and Operations Planning - Master Planning - Workshop Management

17. Which information are relevant in a work instruction?

A	B	C	E
Required parts	Required tools	Required times	the dimensions of components

18. Who creates the BOP?

A	B	C	D	E
Design	Method	Logistic	Maintenance	Production

19. For Joseph Orlicky, independents needs can be estimate by forecasts and dependents needs must be calculated.

A	B
True	False

20. Independents needs come from inside the company.

A	B
True	False

21. Which of the following best describe the Sales and Operations Planning?

A	B	C	D	E
It's the high-level plan for managing resources of the factory	It's generally reviewed in a weekly meeting with the management board and operations managers	It's composed of sales forecasts for product families	The commercial department is responsible of the sales and manufacturing forecasts	None

22. Which of the following formulas represent the average number of pieces in progress?

A	B	C	D	E
$WIP = \frac{\partial}{1+a}$	$WIP = \frac{\partial}{1-b}$	$WIP = \frac{\partial}{a-b}$	$WIP = \frac{\partial}{b-a}$	None

23. Which of the following formulas represent the average waiting time?

A	B	C	D	E
$AWT = \frac{1}{b} \times \frac{\partial}{1+a}$	$AWT = CT \times \frac{\partial}{1-a}$	$AWT = CT \times WIP$	$AWT = \frac{\partial}{LT}$	None

24. Which of the following formulas represent the Lead Time?

A	B	C	D	E
$LT = \frac{1}{b-a}$	$LT = \frac{\partial}{1-CT}$	$LT = \frac{a}{WIP}$	$LT = \frac{CT}{1-\partial}$	None

25. What <u>is not</u> a good definition of MRP2 (one answer)?

A	B	C	D
MATERIAL REQUIREMENT PLANNING	MANAGEMENT REQUIREMENT PLANNING	MANUFACTURING RESSOURCE PLANNING	MONTHLY RESSOURCE PREVISION

26. Which of the following documents are used in production?

A	B	C	D	E
Manufacturing order	Good card	Following issue	Work Order	None

27. Pick the right characteristic(s) of the Takt Time

A	B	C	D	E
An important data to estimate sales forecasts	A time that you must measure after your layout is done	A time that you must calculate, linked to the theorical rhythm	Bigger than the lead time	Useful to manage the production

28. Complete the sentence: "To respect the orders of my customers, the cycle times of each workstation must be … the Takt Time"

A	B	C	D	E
Higher than	Lower than	Strictly equal to	Strictly different than	Friendly with

29. Which of these descriptions of documents for production <u>is wrong</u>.

A	B	C	D
Work order Come from the ERP and describe the work for a workstation on a period of time.	**Work Instruction** Describe step by step the work to do for a process	**Following Card** Showing the capacity of the workstation	**Good issue** It helps to obtain raw materials from the store

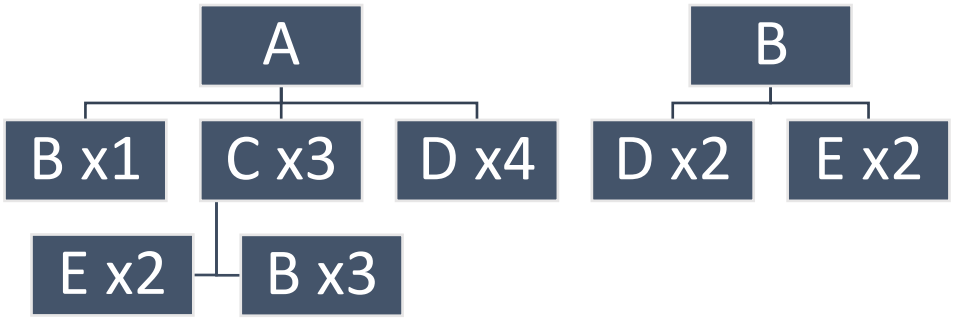
30. One of those affirmations is <u>not correct</u>

A	B	C	D
A safety stock is easy to manage in the Net Requirements calculation, it mustn't be considered as a positive net requirement	In Just In Time production, it's recommended to overload the system to decrease the cycle time	A company that well manage her stocks don't need to use safety stock for Net Requirements calculation	Don't put a buffer to protect you from the risks encountered in the flow

31. What is the horizon for a strategic forecasting?

A	B	C	D
1 HOURS	2 DAYS	3-5 YEARS	2 MONTH AND HALF

Analyse these dependent needs (Q21-24):



32. On which part would you run your first net requirement calculation?

A	B	C	D	E
A	B	C	D	E

33. …your second one?

A	B	C	D	E
A	B	C	D	E

34. …your third one?

A	B	C	D	E
A	B	C	D	E

35. You receive an order to produce 2x"A" and 5x"B". You can buy "E" by boxes of 15 components. How many Boxes will you buy, knowing that your stock of "E" is 20, and safety stock 0.

A	B	C	D	E
0	1	2	3	4

36. Last question was interesting! Let's make it a 2 points question, but I like to keep 1 point/question for the correction software… so please, repeat your last answer (or pick another one if you had some doubts) :)

A	B	C	D	E
0	1	2	3	4

37. Pick the right advantage(s) of an assembly line compared to a modular assembly

A	B	C	D	E
Shorter lead time	Bigger workload	Easier to manage at high-speed production rhythm	None	Less stocks of "in progress goods"

38. What is important about a bottleneck in an assembly line?

A	B	C	D	E
Cycle Time ≤ Takt Time	Cycle Time < Lead Time	Cycle Time < Cycle Time of the previous workstation	Cycle Time < Cycle Time of the next workstation	Buffer stock of required parts

39. According to queuing theory, what can help me to calculate the capacity used rate of a system?

A	B	C	D	E
Cycle time of the workstation	Takt Time of the line	Lead Time of the line	average of pieces coming to the workstation by unit time	Workload of the workstation

40. And to conclude… my Christmas / new year gift for everyone: one free point! … Do you want it?

A	B	C	D	E
I don't really need it: I'm so good!	Yes! And to deserve it, I'll check again that everything is well filled: student number (2 formats), promotion, date (2 formats), and that my answer's colours are dark enough	Unfortunately, I was to slow, and had no time to read this last question…	S&OP !!!	I cheated… I don't deserve it. Please report me to scolarity