

MTH601 grand quiz

The objective function and ----- together form a Linear Programming problem.

Select the correct option

☒	a set of constraints
☐	unrestricted variables
☐	feasible region
☐	optimal solution

Click to Save Answer & Move to Next Question

If weights are 1, 4 and 7 or optimistic, most likely and pessimistic time estimates, respectively, then select the most suitable answer.

Select the correct option

Reload Math Equations

☐	$t_e = \frac{t_o + 4t_m + t_p}{6}$
☐	$t_e = 4$
☐	$S_t = 2$
☐	$V_t = 4$

While solving a network flow problem by PERT, which of the following type of time will be used to measure the length of Critical Path?

Select the correct option

☐	Pessimistic
☒	Expected
☐	Most Likely
☐	Optimistic



Click to Save Answer & Move to Next Question

In the Graphical method, we determine -----.

► Select the correct option

- | | | |
|-----------------------|---|---|
| ☐ | feasible solution from among all optimal solutions. | / |
| ☐ | optimal solution from among all feasible solutions. | / |
| ☐ | basic variables from among all non-basic variables. | / |
| ☐ | non-basic variables from among all basic variables. | / |

Click to Save Answer & Move to Next Question

Which of the following is true about the Manufacturing model without Shortage?

► Select the correct option

- | | | |
|-----------------------|--------------------------------|---|
| ☐ | Demand rate = Replacement rate | / |
| ☐ | Demand rate > Replacement rate | / |
| ☐ | Demand rate < Replacement rate | / |
| ☐ | None of the above choices | / |

Click to Save Answer & Move to Next Question

Which of the following category of items in ABC analysis needs special attention by the management?

► Select the correct option

- | | | |
|-----------------------|--|---|
| ☐ | A category | / |
| ☐ | B category | / |
| ☐ | C category | / |
| ☐ | All categories need equal and fair attention | / |

Click to Save Answer & Move to Next Question

When we have to manage a project with available resources, we have the option of resource leveling. Here the resources availability is less than the maximum resources required for an activity, then it is feasible to delay the job having -----.

► Select the correct option

- | | | |
|-----------------------|---------------------------|---|
| ☐ | dummy branch | / |
| ☐ | largest free float | / |
| ☐ | largest total float | / |
| ☐ | largest independent float | / |

Click to Save Answer & Move to Next Question

While solving a Linear Programming problem by graphical method, the non-negativity constraints will restrict the feasible region(solution space) in -----quadrant.

► Select the correct option

- | | | |
|-----------------------|-----|---|
| ☐ | 1st | / |
| ☐ | 2nd | / |
| ☐ | 3rd | / |
| ☐ | 4th | / |

Click to Save Answer & Move to Next Question

If both jobs 'a(l,n)' and 'b(m,n)' of '7' and '8' days durations respectively, start earlier simultaneously on 4th day, then 'n' can start earlier on -----day.

Select the correct option

- | | | |
|----------------------------------|------|---|
| ☐ | 8th | / |
| ☐ | 11th | / |
| ☐ | 15th | / |
| ☒ | 12th | / |

► Click to Save Answer & Move to Next Question

Choose the correct one for the project times that are used in project management.

Select the correct option

- | | | |
|-----------------------|--|---|
| ☐ | Latest start time, Latest finish time, Earliest start time, Earliest finish time | / |
| ☐ | Latest start time, Latest finish time, Earliest start time, CPM | / |
| ☐ | Latest start time, Latest finish time, PERT, Earliest finish time | / |
| ☐ | PERT, CPM | / |

Click to Save Answer & Move to Next Question

If for path 1-3-4 time is $5+3=8$ days, for path 1-2-3-4 time is $6+7+3=16$ days and for path 1-2-4 time is $6+6=12$ days, then which of the followings is true.

Select the correct option

- | | | |
|----------------------------------|---------|---|
| ☒ | 16 days | / |
| ☐ | 8 days | / |
| ☐ | 12 days | / |
| ☐ | 36 days | / |



Click to Save Answer & Move to Next Question

In which of the following model, the Carrying Cost per unit of time is reduced in the ratio $(1-D)/R$:1?

Select the correct option

- | | | |
|-----------------------|---|---|
| ☐ | Purchasing Model without Shortage | / |
| ☐ | Manufacturing Model without Shortage | / |
| ☐ | Purchasing Model with allowed Shortage | / |
| ☐ | Manufacturing Model with allowed Shortage | / |

Click to Save Answer & Move to Next Question

Under which of the following condition, a mathematical Program would be non-linear?

Select the correct option



If least Objective function is non-linear



If both Objective function and constraints are non-linear

Click to Save Answer & Move to Next Question

A Critical Path in a network flow diagram -----.

Select the correct option



is unique



may at most two



depends on number of dummies



may be multiple

Click to Save Answer & Move to Next Question

Which of the following is uncertain in PERT?

Select the correct option



Activity Cost



Activities' completion times



Resources associated with each activity



Activities' precedence relation



Click to Save Answer & Move to Next Question

For a development project, if its Standard Normal variable = 1.38, expected and the scheduled durations of the project are 100 and 110 days respectively, then Variance in the project length is -----.

Select the correct option

- | | | |
|-----------------------|--------|---|
| ☐ | -7.246 | / |
| ☐ | -52.50 | / |
| ☐ | 52.50 | / |
| ☐ | 7.246 | / |

Click to Save Answer & Move to Next Question

Wilson's model (Purchasing model with no shortages) is of the ----- type.

Select the correct option

- | | | |
|----------------------------------|---------------|---|
| ☐ | Probabilistic | / |
| ☒ | Deterministic | / |

Click to Save Answer & Move to Next Question

Which one of the following is not an operations research problem solving steps?

Select the correct option

- | | | |
|-----------------------|----------------------------|---|
| ☐ | observation | / |
| ☐ | definition of the problems | / |
| ☐ | variable selections | / |
| ☐ | model construction | / |

Click to Save Answer & Move to Next Question

Which one of the following is not an operations research problem solving steps?

Select the correct option

☐	observation	//
☐	definition of the problems	//
☒	variable selections	//
☐	model construction	//



Click to Save Answer & Move to Next Question

A/An ----- is the collection of inter related activities to be performed in a particular sequence to completion.

Select the correct option

☐	node	//
☐	event	//
☒	project	//
☐	branch	//

Click to Save Answer & Move to Next Question

The network flow diagrams for PERT and CPM are same except for -----.

Select the correct option

☐	dummy activities	//
☒	critical Path	//
☐	initial and final events	//
☐	activity times	//

Click to Save Answer & Move to Next Question

Under which of the following condition, the Economic Order Quantity (EOQ) of Manufacturing Model with allowed Shortage can be transformed into the same Model without Shortage?

Select the correct option

- | | | |
|-----------------------|--------------------------------|---|
| ☐ | When Setup Cost is zero | / |
| ☐ | When Setup Cost is infinity | / |
| ☐ | When Shortage Cost is infinity | / |
| ☐ | When Shortage Cost is zero | / |

Click to Save Answer & Move to Next Question

In a network flow diagram, if two jobs 'a(l,n)' and 'b(m,n)' of '7' and '8' days durations respectively, start earlier simultaneously on 4th day, then the next activity containing 'n' as head event can't start until the entering activity ----- is completed.

Select the correct option

- | | | |
|----------------------------------|-------|---|
| ☒ | (m,n) | / |
| ☐ | (l,n) | / |
| ☐ | (m,l) | / |
| ☐ | (l,m) | / |

Click to Save Answer & Move to Next Question

A set of nodes connected by lines which begin at the initial node of a network and end at the terminal node is called _____.

Select the correct option

- | | | |
|----------------------------------|---------------|---|
| ☐ | Critical path | / |
| ☐ | Path | / |
| ☐ | Node | / |
| ☒ | Network | / |

Click to Save Answer & Move to Next Question

If the demand of an item is occurred in the period of stock out and it is satisfied at the beginning of the next cycle then such type of problem will discuss under which of the following?

Select the correct option

- | | |
|-----------------------|------------------------------------|
| ☐ | Purchasing Model with shortages |
| ☐ | Purchasing Model with no shortages |

Click to Save Answer & Move to Next Question

If someone asks you how much time you require to reach your VU campus from your house, you may say that it may take 1 to 1½ hours. Then you meant which of the following variable?

Select the correct option

- | | |
|-----------------------|------------|
| ☐ | Discrete |
| ☐ | Complex |
| ☐ | Random |
| ☐ | Continuous |

Click to Save Answer & Move to Next Question

In the context of Wilson's model, at time $t = 0$, the quantity 'Q' of the product is----- in the inventory.

Select the correct option

- | | |
|-----------------------|---------|
| ☐ | Minimum |
| ☐ | Average |
| ☐ | Maximum |
| ☐ | Zero |

Click to Save Answer & Move to Next Question

Non-feasible solution----- associated with a given linear programming problem.

Select the correct option

- | | | |
|-----------------------|--|---|
| ☐ | satisfy all the constraints | / |
| ☐ | does not satisfy all the constraints | / |
| ☐ | satisfy least one of the constraint | / |
| ☐ | does not satisfy least one of the constraint | / |

Click to Save Answer & Move to Next Question

Which of the following correspond to the practical limitations of available resources while modeling a real life situation into a linear program?

Select the correct option

- | | | |
|-----------------------|--------------------|---|
| ☐ | Objective function | / |
| ☐ | Constraints | / |
| ☐ | Decision variables | / |
| ☐ | Linear function | / |

Click to Save Answer & Move to Next Question

If we increase the inventory, then the shortage cost will -----.

Select the correct option

- | | | |
|-----------------------|-----------------|---|
| ☐ | remain constant | / |
| ☐ | increase | / |
| ☐ | decrease | / |
| ☐ | uncertain | / |

Click to Save Answer & Move to Next Question

While finding the Critical Path, in the phase of Early Start and Early Finish computations, we start from first event and proceed calculations from left to right up to the ----- event.

Select the correct option

☐	starting	/
☐	middle	/
☒	last	/
☐	arbitrary	/

Click to Save Answer & Move to Next Question

Which of the following would be the objective of the yield per minute in a chemical process which depends upon the temperature 'x' and pressure 'y'?

Select the correct option

☐	Maximization	/
☐	Minimization	/
☐	Inflection	/
☐	Average	/

Click to Save Answer & Move to Next Question

In a network flow diagram, if an activity (i,j) starts earlier after two days and finish earlier on fifth day, then which of the following will be its completion time?

Select the correct option

☐	Three days	/
☐	Five days	/
☐	Two days	/
☐	Ten days	/

Click to Save Answer & Move to Next Question

In the phase of Early Start and Early Finish, to find the Critical Path in a network flow diagram, the computations are proceeded from ----- to the final event.

Select the correct option

☐	bottom to top	/
☐	right to left	/
☒	left to right	/
☐	top to bottom	/

Click to Save Answer & Move to Next Question

The word 'Linear' in Linear programming problem describes ----- between two or more variables.

Select the correct option

☐	that a Correlation exists	/
☐	a recurrence relation	/
☒	a direct proportionate relation	/
☐	an inverse proportionate relation	/

Click to Save Answer & Move to Next Question