

Question No: 1 (Marks: 1) - Please choose one

EST and EFT of activities are calculated in

- ▶ Forward pass
- ▶ Backward pass
- ▶ Path does not effected

Question No: 2 (Marks: 1) - Please choose one

_____ may be less than most likely time estimate

- ▶ Pessimistic time estimate
- ▶ Smallest time estimate
- ▶ Optimistic Time estimate

Question No: 3 (Marks: 1) - Please choose one

The dummy activities consume

- ▶ No time, no resources
- ▶ No time but some resources
- ▶ Some resources in minimum time
- ▶ None of these

Question No: 4 (Marks: 1) - Please choose one

If an activity consumes no time and no resources then this activity is called _____.

- ▶ dummy activity
- ▶ sequential activity
- ▶ critical activity
- ▶ cyclic activity

Question No: 5 (Marks: 1) - Please choose one

Cost period = ----- \times (No of ordered items)

- ▶ Holding cost
- ▶ Set up cost
- ▶ Stock out cost
- ▶ Item cost

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Question No: 6 (Marks: 1) - Please choose one

The following network is an example of

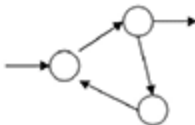


- ▶ Redundancy
- ▶ Cycling
- ▶ Looping

► Merging

Question No: 7 (Marks: 1) - Please choose one

The following network is an example of



- Redundancy
- Dangling
- **Cycling**
- Dummy

Question No: 8 (Marks: 1) - Please choose one

Which one is best describe Micro Economic Planning?

- Distribution of fertilizer
- **Improving the layout of a workshop in a company**
- Investment planning of the country
- PERT

Question No: 9 (Marks: 1) - Please choose one

If $t_o = 6$, $t_m = 12$ and $t_p = 18$, then $V_i =$ _____

- ▶ 12
- ▶ 2
- ▶ 4
- ▶ 144

Question No: 10 (Marks: 1) - Please choose one

Which inventory model also known as a saw tooth model?

- ▶ Purchasing Model with no shortages
- ▶ Purchasing Model with shortages
- ▶ Manufacturing Model with no shortages
- ▶ Manufacturing Model with shortages

Question No: 11 (Marks: 1) - Please choose one

For backward pass computations

- ▶ Earliest start time \geq Latest start time
- ▶ Earliest start time \leq Latest start time
- ▶ Earliest start time + Latest start time = 0
- ▶ Earliest start time = Latest start time

Question No: 12 (Marks: 1) - Please choose one

For an activity if optimistic time, most likely time estimate and pessimistic time estimate are 3, 6 and 15 respectively then expected time is

- ▶ 4
- ▶ 3
- ▶ 7
- ▶ 20

Question No: 13 (Marks: 1) - Please choose one

In a quadratic programming problem unlike linear programming problem

- ▶ Only objective function is quadratic
- ▶ Both objective function and constraints are quadratic
- ▶ Only constraints are quadratic
- ▶ At least one of objective function or constraint must be quadratic

Question No: 14 (Marks: 1) - Please choose one

Solution region of the constraint $x \geq 0$ is

- ▶ Half plane to the right of straight line $x = 0$
- ▶ Half plane to the right of y-axis
- ▶ Half plane to the region where abscissas are non-negative
- ▶ All are equivalent

Question No: 15 (Marks: 1) - Please choose one

A dummy activity is a simulated activity of sorts, one that is of _____ duration and is created for the sole purpose of demonstrating a specific relationship and path of action on the arrow diagramming method.

▶ Zero

▶ Minimum

▶ Maximum

▶ Average

Question No: 16 (Marks: 1) - Please choose one

Activity definition refers to the process of parsing a project into a number of individual tasks which must be completed _____ the deliverables can be considered completed. Activity definitions rely on a number of specific input processes.

▶ before

▶ both before and after

▶ after

Question No: 17 (Marks: 1) - Please choose one

A forward pass is used to determine and calculate the _____ dates, through utilization of a previously specified start date.

▶ early start and early finish

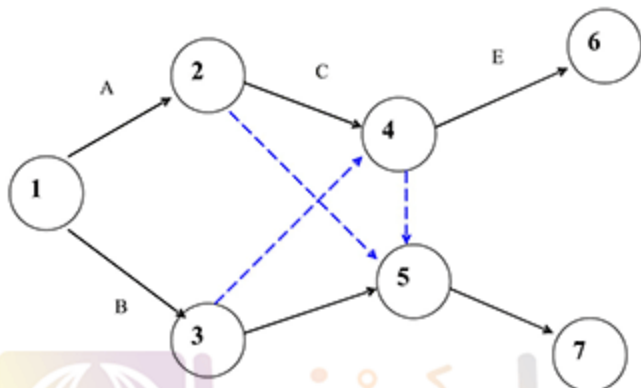
▶ late start and early finish

▶ early start and late finish

▶ late start and late finish

Question No: 18 (Marks: 1) - Please choose one

Is this Network legal?



► Yes.

► No.

Question No: 19 (Marks: 1) - Please choose one

Total cost per period = Item cost + Order cost + Holding cost + _____.

► Shortage cost

► Optimum Shortage (S^*)

► Economic Order Quantity. (Q^*)

► Maximum Inventory. (I_{max})

Question No: 20 (Marks: 1) - Please choose one

$$K = Z \times (---)$$

Where K is called service factor.

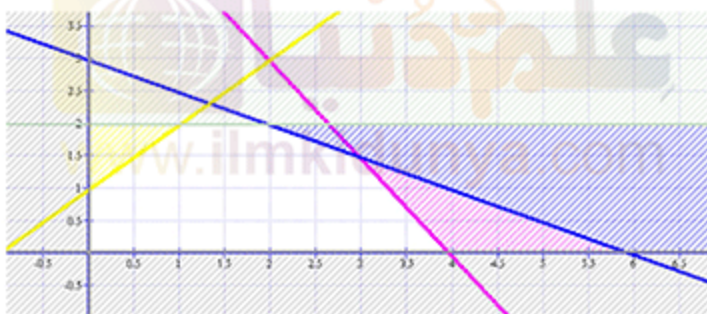
▶ $\sqrt{\pi/2}$

▶ $\sqrt{2/\pi}$

▶ $\sqrt{2\pi/3}$

▶ $\sqrt{3\pi/2}$

Question No: 21 (Marks: 2)



Using above graph, Write down the equation (Blue shaded area).

Question No: 22 (Marks: 3)

Draw a net work diagram for the following dependency relationship.

A controls F, G and H; B controls G and H with H controlled by C.

Question No: 23 (Marks: 5)

Draw the graph of the following constraints.

$$\begin{aligned}x &\leq 4 \\2y &\leq 12 \\2x+3y &\leq 18 \\x \geq 0, \quad y &\geq 0\end{aligned}$$

Question No: 24 (Marks: 10)

Solve by Graphical method:

Shows corner points and optimize the objective function.



$$\text{Max. } Z = 5x_1 - 3x_2 + 10$$

Subject to:

$$2x_1 - 3x_2 \geq 6$$

$$x_2 + 4x_2 \leq 10$$

$$2x_1 + 5x_2 \geq 4$$

$$x_1 \geq 0, \quad x_2 \geq 0$$

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