



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

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EST and EFT of activities are calculated in

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

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

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\_\_\_\_\_ 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**

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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**

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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**

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Cost period = ----- × ( No of ordered items )

▶ Holding cost

▶ Set up cost

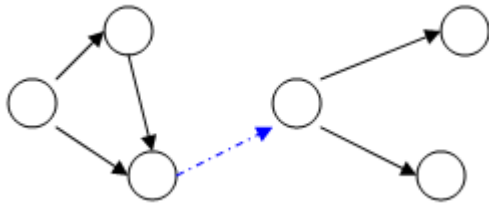
▶ Stock out cost

▶ Item cost

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

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The following network is an example of



▶ Redundancy

▶ Cycling

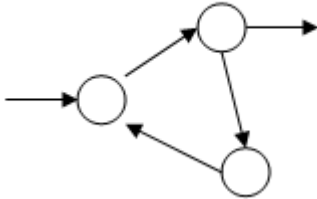
▶ Looping

► Merging

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

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The following network is an example of



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

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

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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**

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If  $t_0 = 6$ ,  $t_m = 12$  and  $t_p = 18$ , then  $V_f =$  \_\_\_\_\_

- ▶ 12
- ▶ 2
- ▶ 4
- ▶ 144

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

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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**

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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**

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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**

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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**

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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**

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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**

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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**

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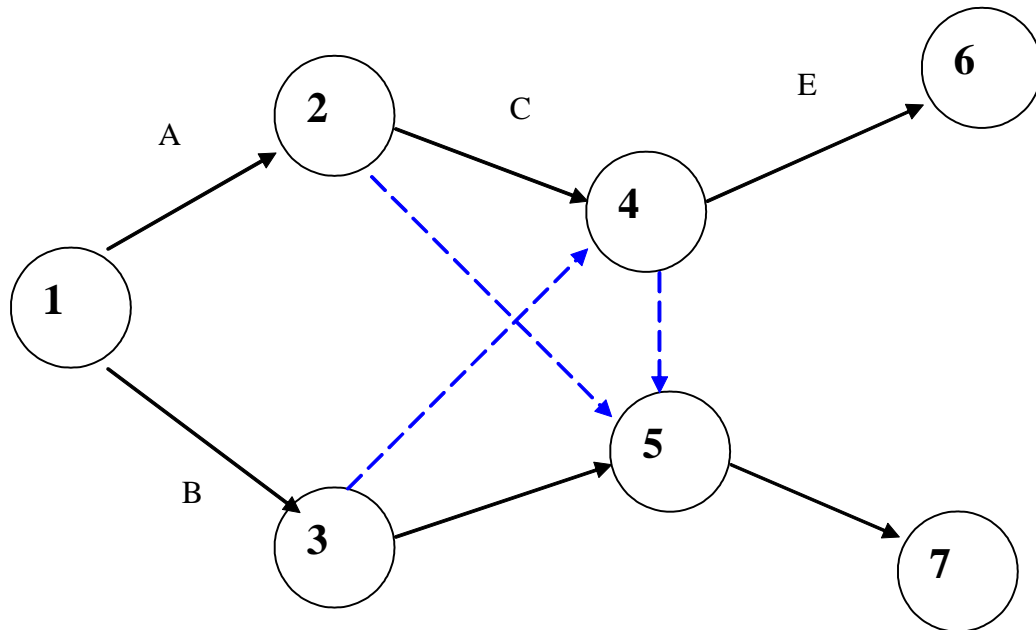
A forward pass is used to determine and calculate the \_\_\_\_\_ dates, through utilization of a previously specified start date.

- ▶ 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**

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Is this Network legal?



► Yes.

► No.

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

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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**

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$$K = Z \times (\text{---})$$

Where K is called service factor.

$\sqrt{\pi/2}$

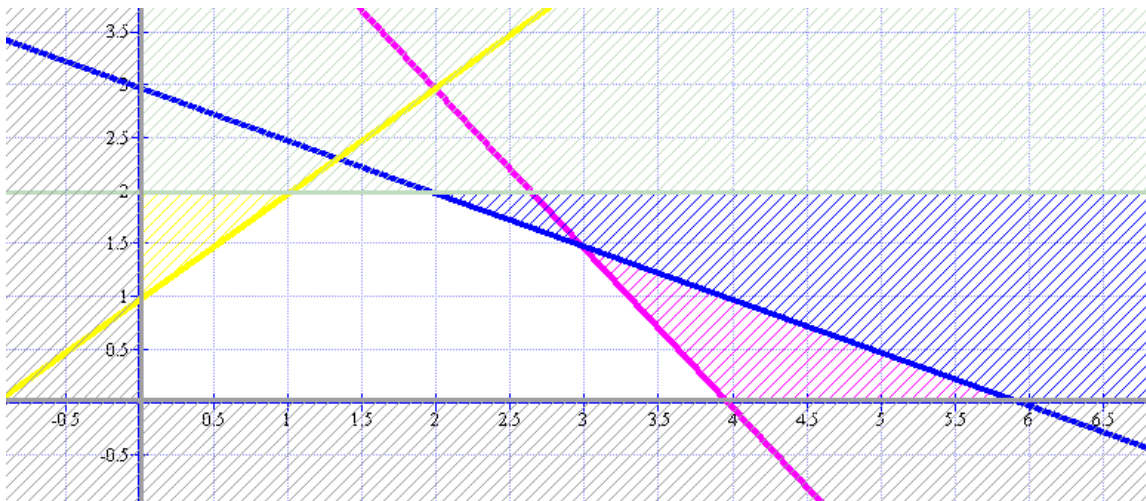
$\sqrt{2/\pi}$

$\sqrt{2\pi/3}$

$\sqrt{3\pi/2}$

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**Question No: 21 ( Marks: 2 )**



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

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**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 )**

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**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 )**

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Solve by Graphical method:  
Shows corner points and optimize the objective function.

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

*Subject to :*

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

$$x_1 + 4x_2 \leq 10$$

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

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