MTH601 Midterm 2006 Paper - Operations Research

MTH601 Midterm Question Paper of Operations Research

fall 2006 - Session 6
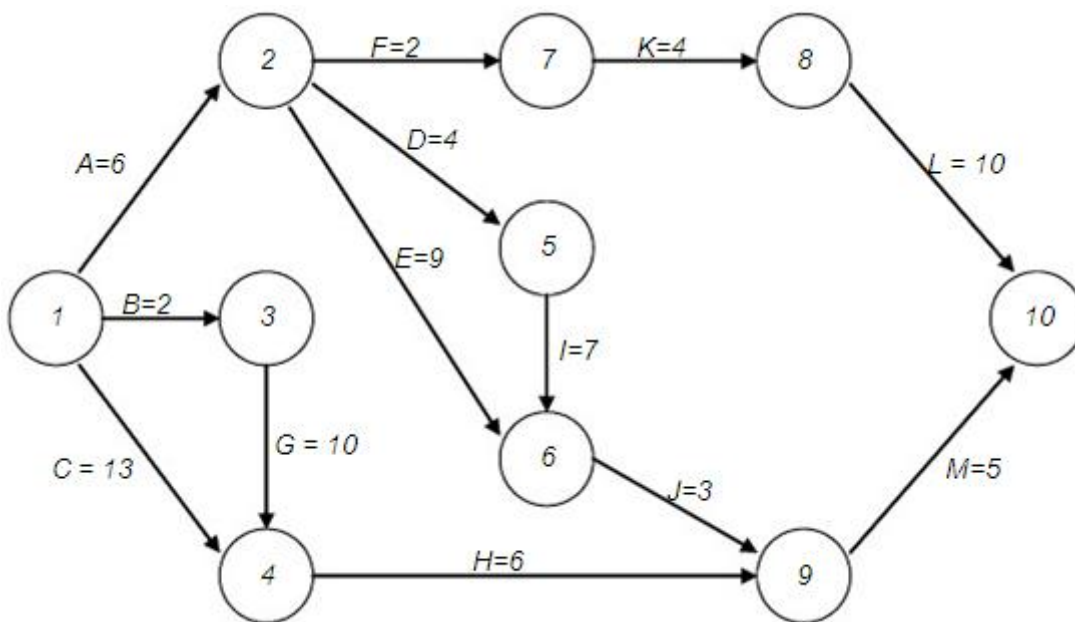
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Marks = M = 40

Time: 60min

MTH601 - Operations Research - Q. No. 1 (M - 10)

Calculate the

 (i). EST, EFT, LST and LFT for each activity.

 (ii). Total Float, Free Float and Independent Float.

(iii). Critical activities and Critical Path.

MTH601 - Operations Research - Q. No. 2 (M - 15)

An Automobile factory manufacturers a particular type of gear within the factory. This gear is used in the final assembly. The particulars of this gear are:

 Demand rate =14000 units/year

 Manufacturing rate =35000 units/year

 Set up cost =Rs 500 per set up

 Holding cost = Rs 15/units/year

     Determine:

(a) The optimum manufacturing quantity. (http://www.vuzs.info/study-portals/bscs-study-portal.html)

(b) The maximum inventory.

(c) The time between orders.

(d) The number of orders/year.

(e) The time of manufacture.

(f) The optimum annual cost if the cost of the item per unit is Rs. 25

MTH601 - Operations Research - Q. No. 3 (M - 10)

Consider the following problem, Solve graphically

Minimize. $Z = 3X_1 + 2X_2$

Subject to

$2X_1 + X_2 \geq 10$

$-3X_1 + 2X_2 \leq 6$

$X_1 + X_2 \geq 6$

$X_1 , X_2 \geq 0$

MTH601 - Operations Research - Q. No. 4 (M - 1)

Which one is best describe Sectoral planning

► Inventory Planning in agriculture

► Improving the layout of a workshop in a company

► Simulation Modeling of the Economy of the country

► None of these.

MTH601 - Operations Research - Q. No. 5 (M - 1)

_____ is the most appropriate to situations where we maintain a relative stable employment levels and utilize the resource at a more constant rate

► (a). Resource Leveling Program

► (b). Resource Allocation Program

► (c). Both a & b

► (d). None of these.

MTH601 - Operations Research - Q. No. 6 (M - 1)

If the slack time is zero, it means that the project will be

► Delayed

► Completed on schedule

MTH601 - Operations Research - Q. No. 7 (M - 1)

The amount of an activity can be delayed without affecting the early start time of any other job, is called

► Free Slack

► Independent Slack

► Total Slack

► None of these.

MTH601 - Operations Research - Q. No. 8 (M - 1)

Let FS = Free Slack, TS = Total Slack, INDS = Independent Slack, (http://www.vuzs.info/study-portals/bscs-study-portal.html) then which relation is true   vuzs

► (a). TS ≤ FS

► (b). INDS ≤ FS

► (c). FS ≤ TS

► (d). Both (b) & (c)

► (e). Both (a) & (c)