MTH-601 Operations Research
Update MCQS For Mid Term
Solve By Vu Topper RM

80 To 100% Marks

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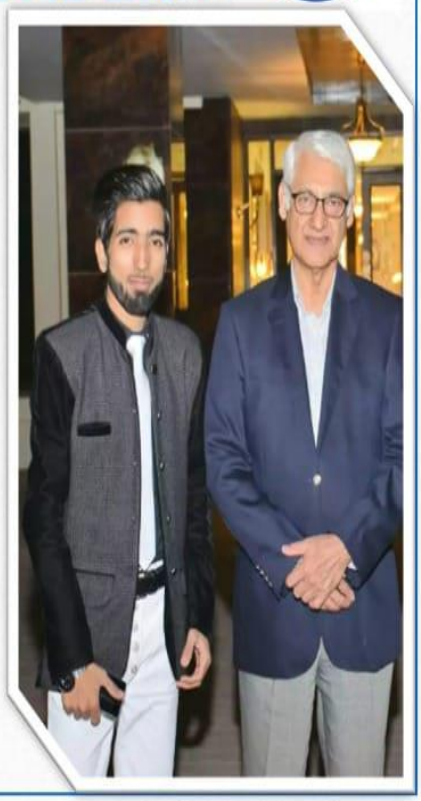

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Question No:1 **(Marks:1)** **Vu-Topper RM**

There are _____ kinds of time calculations for a project.

A. 2 types
B. 4 types
C. 6 types
D. 8 types

Question No:2 **(Marks:1)** **Vu-Topper RM**

Which of the following value is correct for the Variance of an activity times having optimistic, pessimistic and most likely values as 4, 8 and 6 days respectively?

A. 0.1
B. 0.147
C. 0.666
D. 0.444

Question No:3 **(Marks:1)** **Vu-Topper RM**

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.

A. Minimum
B. Maximum
C. Average
D. Zero

Question No:4 **(Marks:1)** **Vu-Topper RM**

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.

A. Before
B. After

C. Both before and after
D. None of the these

Question No:5 **(Marks:1)** **Vu-Topper RM**

Best possible time estimate that a given activity would take under normal conditions which often exist, is called

A. Pessimistic time estimate
B. Smallest time estimate
C. None of the above
D. Most likely time estimates

Question No:6 **(Marks:1)** **Vu-Topper RM**

While solving a LP by Simplex method, which of the following corresponds to corner points of the feasible region in Graphical method?

A. Non-feasible solution
B. Basic feasible solution
C. Non-basic feasible solution
D. Non-negative solution

Question No:7 **(Marks:1)** **Vu-Topper RM**

In a network flow diagram, if an event is the predecessor of three other events, then how many dummies are inevitable to include in the network?

A. One
B. Two
C. Four
D. Three

Question No:8 **(Marks:1)** **Vu-Topper RM**

For finding the maximum profit in an enterprise of selling two products such that freezing the sale of one product and keep selling the other. This scenario is studied under.

A. Un-roundedness

B. Duality
C. Degeneracy
D. None of the these

Question No:9 (Marks:1) Vu-Topper RM
Which of the following order pair would minimize the object function of the linear programming problem: z=x+5y subject to x≥ 2, $y \geq 0$?
A. (2,3)
B. (2,0)
C. (0,3)
D. (0,2)

Question No:10 (Marks:1) Vu-Topper RM
A balanced transportation model with 5 number of source 7 destinations has_ number of constraint equations.
A. 2
B. 12
C. 35
D. 20

Question No:11 (Marks:1) Vu-Topper RM
The cost coefficient of artificial variable in objective function is .
A. 0
B. 1
C. 2
D. M

Question No:12 (Marks:1) Vu-Topper RM
About which of the following it is true that, "they only signify with the passage of time, the beginning and ending of some activities under no consumption of resources"?
A. Project
B. Nodes

C. Dummy
D. Branch

Question No:13 **(Marks:1)** **Vu-Topper RM**
If we increase the inventory, then the shortage cost will decrease and the carrying cost will ___
A. Remain constant
B. Increase
C. Also decrease
D. Uncertain

Question No:14 **(Marks:1)** **Vu-Topper RM**
In a Project Management, if the Critical activities of a network are delayed then ___
A. Project finish time will have to extend
B. Project cost will increase
C. More resources have to employed
D. All above choices are equivalent

Question No:15 **(Marks:1)** **Vu-Topper RM**
If the economic order quantity and the annual demand of a product are 2500 and 5000 units respectively, then WITHOUT any shortage the time between the consecutive orders is ___ months
A. 0.2
B. 2.50
C. 0.50
D. 1.50

Question No:16 **(Marks:1)** **Vu-Topper RM**
While solving a Linear Programming problem, the first step is ___
A. To obtain alternate solutions
B. To obtain basic feasible solutions
C. Formulation of the problem

D. Model building

Question No:17 **(Marks:1)** **Vu-Topper RM**

A linear programming model has three basic components; the decision variables, the Objective function and ___

A. Constraints
B. Unrestricted variables
C. Feasible solution
D. Artificial variable

Question No:18 **(Marks:1)** **Vu-Topper RM**

Which of the following is the major assumed difference between the models of Purchasing and Manufacturing without shortage?

A. Replacement rate
B. Shortage
C. Demand
D. Item, Setup and Holding Costs

Question No:19 **(Marks:1)** **Vu-Topper RM**

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 ___

A. -7.246
B. -52.50
C. 52.50
D. 7.246

Question No:20 **(Marks:1)** **Vu-Topper RM**

The draw back of the Graphical method to solve a LP is that the problem of ___ can not be handled by this

A. Higher dimension(n>2)
B. Low dimension(n<3)
C. Duality

D. Degeneracy

Question No:21 (Marks:1) Vu-Topper RM

In the phase of Late Start and Late Finish, to find the Critical Path in a network flow diagram, which of the following will be taken as latest finish time of the final event?

A. Early Start of the final event
B. Early finish of final event
C. Late start of the final event
D. Expected time of final event

Question No:22 (Marks:1) Vu-Topper RM

In resource leveling when two or more jobs complete for some resource first try to allocate on activity which is of duration end next to the activity which having next_duration.

A. Most likely, pessimistic
B. Minimum, maximum
C. Maximum, Minimum
D. Optimistic most likely

Question No:23 (Marks:1) Vu-Topper RM

By putting the replacement rate 'R → infinity' in the Economic Order Quantity (EOQ) of Manufacturing Model with allowed Shortage, then the result is ___

A. EOQ of Purchasing Model without Shortage
B. EOQ of Manufacturing Model without Shortage
C. EOQ of Purchasing Model with allowed Shortage
D. None of the these

Question No:24 (Marks:1) Vu-Topper RM

Which of the following would be the objective of the efficiency of a certain air conditioning system depending upon temperature 'x', pressure 'y', moisture 'w' and cross-sectional area of outlet 'u'?

A. Minimization
B. Inflection
C. Average
D. Maximization

Question No:25 **(Marks:1)** **Vu-Topper RM**
In a project, a network diagram shows the ___ relations of the inter related activities along with their corresponding activity times.
A. Deterministic and probabilistic
B. Precedence or succession
C. Union and intersection
D. Dummy and artificial

Question No:26 **(Marks:1)** **Vu-Topper RM**
In Wilson's model, Total cost = ___
A. Item cost + holding cost + shortage cost + setup cost
B. Item cost + holding cost + shortage cost
C. Holding cost + shortage cost + setup cost
D. Item cost + set up cost + holding cost

Question No:27 **(Marks:1)** **Vu-Topper RM**
For a development project, if its standard deviation of project length = 8, expected and scheduled duration of the complete project are 50 and 45 days respectively, then which of the following will be the Standard Normal Variable of the project?
A. -1.7677
B. -0.625
C. 0.625
D. 1.7677

Question No:28 **(Marks:1)** **Vu-Topper RM**
A/An ___ is the collection of inter related activities in particular sequence to completion

A. Node
B. Event
C. Project
D. Branch

Question No:29 **(Marks:1)** **Vu-Topper RM**

For a development project, if its Standard Normal variable = 1.38, expected and the schedule durations of the project are 100 and 110 days respectively, then the Standard Deviation in the project length is ___

A. 7.246
B. -7.246
C. -52.50
D. 52.50

Question No:30 **(Marks:1)** **Vu-Topper RM**

If for path 1-3-4 time is 5+3=8, 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 following is true

A. 1-3-4 is critical path
B. 1-2-4 is critical path
C. 1-2-3-4 is critical path
D. 1-4 is critical path

Question No:31 **(Marks:1)** **Vu-Topper RM**

In project Management, Program Evaluation and Review Technique (PERT) is based on ___ times

A. Deterministic
B. Probabilistic
C. Stochastic
D. Serial

Question No:32 **(Marks:1)** **Vu-Topper RM**

Which of the following is the major objective of the ABC analysis of inventory?

A. To fulfill the demand of items
B. To replace the required items in proper time
C. To control the inventories
D. To classify the items in different categories

Question No:33 **(Marks:1)** **Vu-Topper RM**

Which of the following phases are performed to find the critical path in CPM?

A. Forward and Backward (Early and Late finish program)
B. Program Evaluation and Review
C. Resource Scheduling and Allocation
D. Precedence and succession

Question No:34 **(Marks:1)** **Vu-Topper RM**

Which of the following value is correct for the expected time of an activity having optimistic, pessimistic and most likely times as 4, 8 and 6 days respectively?

A. 6.66 days
B. 9.33 days
C. 6 days
D. 4.66 days

Question No:35 **(Marks:1)** **Vu-Topper RM**

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

A. A category
B. B category
C. C category
D. All categories need equal and fair attention

Question No:36 **(Marks:1)** **Vu-Topper RM**

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

A. Objective function
B. Constraints
C. Decision variables
D. Linear function

Question No:37 **(Marks:1)** **Vu-Topper RM**

While identifying the Critical Path of a network flow diagram, the Late Start and Late Finish phase confirms that project start time is ___

A. Serial
B. Zero
C. Infinity
D. Arbitrary

Question No:38 **(Marks:1)** **Vu-Topper RM**

In PERT, the possible variation in activity times is measured from Standard Deviation which is ___ of the difference between Pessimistic and Optimistic times

A. One sixth
B. One fourth
C. One third
D. One fifth

Question No:39 **(Marks:1)** **Vu-Topper RM**

Which of the following property ensures that the decision variables can be divided into any fractional levels so that the rational (fractional) values for the decision variables are permitted?

A. Deterministic
B. Additivity
C. Proportionality

D. Divisibility

Question No:40 (Marks:1) Vu-Topper RM

Which of the following is the objective of Project Management by using PERT and CPM methods, for any project subject to resource constraints?

A. To minimize the project time
B. To maximize the total project profit
C. To minimize the total project cost
D. To minimize the resource constraints

Question No:41 (Marks:1) Vu-Topper RM

If we increase the inventory, then the shortage cost will ___

A. Remain constant
B. Increase
C. Decrease
D. Uncertain

Question No:42 (Marks:1) Vu-Topper RM

In PERT, the possible variation in activity times can be measured from ___ of the corresponding Beta Distribution

A. Variance
B. Mean
C. Expected Time
D. Standard Deviation

Question No:43 (Marks:1) Vu-Topper RM

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.

A. Bottom to top
B. Right to left
C. Left to right

D. Top to bottom

Question No:44 (Marks:1) Vu-Topper RM

In a network flow diagram, for an activity (i, j) of duration of three days, if its earliest start time is of two days then which of the following will be its early finish time?

A. Six days
B. One day
C. Five days
D. One and half day

Question No:45 (Marks:1) Vu-Topper RM

In an optimization problem, we seek for maximizing or minimizing a specific quantity, called the ___

A. Decision variables
B. Constraints
C. Feasible solution
D. Objective function

Question No:46 (Marks:1) Vu-Topper RM

Modeling of a Linear Programming problem from a real life world is a/an

A. Art
B. Science
C. Engineering
D. Technology

Question No:47 (Marks:1) Vu-Topper RM

In a Linear Programming problem which of the following condition is compulsory?

A. Least Objective function needs to be linear
B. Least constraints need to be linear
C. Both Objective function and constraints need to be linear

D. Neither objective nor constraints to be linear

Question No:48 (Marks:1) Vu-Topper RM

In a network flow diagram, the precedence relationship among the activities is indicated through ___

A. Project
B. Branch
C. Dummy
D. Nodes

Question No:49 (Marks:1) Vu-Topper RM

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

A. Demand rate = Replacement rate
B. Demand rate > Replacement rate
C. Demand rate < Replacement rate
D. None of the above

Question No:50 (Marks:1) Vu-Topper RM

In a development project, if an activity (i,j) of six days duration, starts late on 3rd day then which of the following will be its latest finish time?

A. 9th day
B. 2nd day
C. 3rd day
D. 18th day

Question No:51 (Marks:1) Vu-Topper RM

In the relation of finding the expected time of an activity, most likely time is weighted more than the other optimistic and pessimistic times and these exist in the ratio of --.

A. 6:1
B. 2:1
C. 4:1

D. 3:1

Question No:52 **(Marks:1)** **Vu-Topper RM**

In Project Management, Critical Path method is based on-------times.

A. Deterministic
B. Probabilistic
C. Stochastic
D. Serial

Question No:53 **(Marks:1)** **Vu-Topper RM**

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

A. Dummy activities
B. Critical Path
C. Initial and final events
D. Activity times

Question No:54 **(Marks:1)** **Vu-Topper RM**

Which of the following Probabilistic time in PERT has the same analogical meaning of Deterministic time (time to complete any activity) inCPM?

A. Expected
B. Optimistic
C. Pessimistic
D. Most Likely

Question No:55 **(Marks:1)** **Vu-Topper RM**

The task which is executed by the usage of resources and time is called.

A. Node
B. Event
C. Project
D. Activity

Question No:56 **(Marks:1)** **Vu-Topper RM**

In a network flow diagram, two jobs (i,j) and (i,k) of '9'and '6' days duration leaves the node 'i' then which of the following will be Late start time for 'i', if it is provided that both (i,j) and (i,k) finish late on 12th and 8th day respectively?

A. 6th day
B. 2nd day
C. 3rd day
D. 1st day

Question No:57 **(Marks:1)** **Vu-Topper RM**

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

A. Is unique
B. May at most two
C. None of the above
D. Depends on number of dummies may be multiple

Question No:58 **(Marks:1)** **Vu-Topper RM**

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?

A. Pessimistic
B. Expected
C. Most Likely
D. Optimistic

Question No:59 **(Marks:1)** **Vu-Topper RM**

For any activity (i,j), if , a) Earliest start time of 'i' = Latest finish time of 'i', b) Earliest start time of 'j' = Latest finish time of 'j', c) difference of Earliest start times of events 'i' and ''j = difference of Latest finish times of events 'i'and 'j' = time to complete the job, then the activity (i,j) is said to be.

A. Dummy
B. Critical

C. Non-Critical
D. None of the above

Question No:60 **(Marks:1)** **Vu-Topper RM**
In a project, a network diagram shows the precedence relations of inter related activities along with their corresponding activity --.

A. Times
B. Cost
C. Profit
D. Quantity

Question No:61 **(Marks:1)** **Vu-Topper RM**
Which of the following relation is true among the probabilistic times in PERT?

A. Most Likely < Optimistic < Pessimistic
B. Optimistic < Most Likely < Pessimistic
C. Most Likely < Pessimistic < Optimistic Pessimistic
D. < Most Likely < Optimistic

Question No:62 **(Marks:1)** **Vu-Topper RM**
In a network flow diagram, for an activity (i,j) of six days duration, if its Late Finish time is of nine days, then which of the following will be its Late Start time?

A. Twelve days
B. Fifteen days
C. Three days
D. Six days

Question No:63 **(Marks:1)** **Vu-Topper RM**
In a network flow diagram, which of the following method through computations provides, I) start and completion times for each activity, ii) critical and non-critical activities and iii) total and free slacks?

A. Resource Scheduling

B. Resource Allocation
C. PERT
D. CPM

Question No:64 (Marks:1) Vu-Topper RM
In the phase of Early Start and Early Finish, to find the Critical Path in a network flow diagram, for the first node(event), we start with time --.
A. t = infinity
B. t = 0
C. t = a (arbitrary)
D. With strict positive value

Question No:65 (Marks:1) Vu-Topper RM
If an activity has non-zero value of total float such that it can be further delayed to the length of slack without delaying the project, then it is said to be ---------
A. Critical
B. Dummy critical
C. Non-Critical
D. None of the above

Question No:66 (Marks:1) Vu-Topper RM
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.
A. (m,n)
B. (l,n)
C. (m,l)
D. (l,m)

Question No:67 **(Marks:1)** **Vu-Topper RM**

Which of the following correspond to the practical limitation of available resource while modeling a real-life situation into a linear program?

A. Constraints
B. Objective function
C. Linear function
D. Decision variables

Question No:68 **(Marks:1)** **Vu-Topper RM**

In the graph of the purchasing model with shortages the area under the horizontal axis represents_ .

A. Set up cost of item
B. Purchase cost of item
C. Carrying cost of item
D. Shortage cost of item

Question No:69 **(Marks:1)** **Vu-Topper RM**

The straight line associated with the constraints $2x+3y<12$ will meet x-axis at a distance of_ units from origin.

A. 2
B. 4
C. 6
D. 3

Question No:70 **(Marks:1)** **Vu-Topper RM**

In a network flow a diagram for an activity(I,j) of duration of three days if its earliest start time is of two days then which of the following will be its early finish time?

A. One and half day
B. One day
C. Six days
D. Five days

Question No:71 **(Marks:1)** **Vu-Topper RM**

In a development project. If an activity (m,n) of seven days duration starts late on 5rd day then which of the following will be its latest finish time?

A. 7th day
B. 5th or 7th day
C. 12th day
D. 5th day

Question No:72 **(Marks:1)** **Vu-Topper RM**

Which of the following is an intermediate step to model a linear programming problem?

A. Identify the objective function.
B. Identify the non-negative restrictions and constraints
C. Identify the unknown decision variables
D. None of the these

Question No:73 **(Marks:1)** **Vu-Topper RM**

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

A. Project
B. Branch
C. Event
D. Node

Question No:74 **(Marks:1)** **Vu-Topper RM**

Which of the following is an operation research (OR) process?

A. Simplex method
B. Linear programming
C. Observation
D. Networking

Question No:75 **(Marks:1)** **Vu-Topper RM**

In the purchasing Model with shortages the cost function C(S,Q) can also be expressed as function of .

A. (S, D)
B. (Q, D)
C. (S. T)
D. (T, D)

Question No:76 **(Marks:1)** **Vu-Topper RM**

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'?

A. Minimization
B. Inflection
C. Maximization
D. Average

Question No:77 **(Marks:1)** **Vu-Topper RM**

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

A. Observation
B. Definition of the problems
C. Variable selections
D. Model construction

Question No:78 **(Marks:1)** **Vu-Topper RM**

In the Dynamic order Quantity if the ratio of setup and carrying costs is 500 and the demands of 2nd and 3rd months are 50 and 130 respectively then which of the following is true about the 2nd months requirement?

A. 2nd month demand can be included in 1st month
B. 2nd month demand can be included in 3rd month
C. 2nd month demand can be included in any month of the year
D. 2nd month demand will have to fulfill in 2nd month

Question No:79 **(Marks:1)** **Vu-Topper RM**

The mathematical technique which is used to solve a wide class of problems such as allocating scarce resource among competitive activities is known as_ .

A. Classical model
B. Descriptive model
C. Linear programming model
D. Mathematical model

Question No:80 **(Marks:1)** **Vu-Topper RM**

Which of the following would be the objective of the cast per unit of producing certain cameras?

A. Average
B. Minimization
C. Inflection
D. Maximization

Question No:81 **(Marks:1)** **Vu-Topper RM**

In CPM each activity has one deterministic time while in PERT each activity has_ probabilistic time/times

A. Three
B. Also, one
C. Two
D. No

Question No:82 **(Marks:1)** **Vu-Topper RM**

In the phase of early start and early finish to find the critical path in a network flow diagram the computation are proceeded from_ to the final event.

A. Left to right
B. Bottom to top
C. Top to bottom
D. Right to left

Question No:83 **(Marks:1)** **Vu-Topper RM**

In a development project, if an activity(I,j) of six days duration starts late on 3rd day then which of the following will be its latest finish time?

A. 18th day
B. 9th day
C. 3rd day
D. 2nd day

Question No:84 **(Marks:1)** **Vu-Topper RM**

If the annul demand of a product is 10000 items , and its set up and inventory costs are 200 and 100 respectively then its economic order quantity is provided that shortage is fulfilled INSTANTANEOUSLY.

A. 200units
B. 20000units
C. 40000units
D. 100 units

Question No:85 **(Marks:1)** **Vu-Topper RM**

For a LP problem say,Max.z=x+y, under the condtraints xy>=0 the feasible region would be .

A. All the first quadrant
B. All xy-plane
C. Empty
D. Point (0,0)

Question No:86 **(Marks:1)** **Vu-Topper RM**

By which of the following method any complex linear programming problem can be handled?

A. Degenerate method
B. Graphical method
C. Simplex method
D. Dual method

Question No:87 **(Marks:1)** **Vu-Topper RM**

In the phase of Early start and early finish to find the critical path in a network flow diagram flow diagram, for the first node(event) we start will time.

With strict positive value

A. T-0

B. T=a(arbitary)

C. T=infinity

D. None of the above

Question No:88 **(Marks:1)** **Vu-Topper RM**

Which of the following event has no immediate predecessor in any network flow diagram?

A. Critical Event

B. Head Event

C. Tail Event

D. Non_criticalmevent

Question No:89 **(Marks:1)** **Vu-Topper RM**

For critical path of a network which of the following is the best suitable answer.

A. Its total float is zero

B. Its free float is zero

C. All of the above

D. Its independent float is zero

Question No:90 **(Marks:1)** **Vu-Topper RM**

Which of the following quantity will very in case of Dynamic order quantity model?

A. Setup Cost

B. Carrying Cost

C. Item Cost

D. Demand

Question No:91 **(Marks:1)** **Vu-Topper RM**

Which of the following will be annual optimum cost of a product if the number of annual orders without any shortage is 25 and the total cpst of onecycle is 10,000?

A. Rs.400
B. Rs.10025
C. Rs.9975
D. Rs.250000

Question No:92 **(Marks:1)** **Vu-Topper RM**

Which of the following would be the objective of the daily loss of heat in a heating system?

A. Maximization
B. Minimization
C. Inflection
D. Average

Question No:93 **(Marks:1)** **Vu-Topper RM**

While applying Simplex method to a LP of minimization type, we proceed stepwise from one__ solution to another in such away that the objective function always increase its value.

A. Optimal
B. Non-basic feasible
C. Basic feasible
D. Degenerate

Question No:94 **(Marks:1)** **Vu-Topper RM**

Solution of a Linear programming problem is found by_methods.

A. Analytical
B. Probabilistic
C. Average
D. Pare algebraic

Question No:95 **(Marks:1)** **Vu-Topper RM**

Critical path in a network flow diagram_____.

A. Is unique

B. May at most two

C. Depends on number of dummies

D. May be multiply

Question No:96 **(Marks:1)** **Vu-Topper RM**

In the dynamic order quality problem, the demands of all succeeding months can be included in the demand of preceding one provide that.

A. Item and holding costs are balanced

B. Shortage and setup costs are balanced

C. Setup and holding costs are balanced

D. Shortage and item costs are balanced

Question No:97 **(Marks:1)** **Vu-Topper RM**

In the ABC analysis the items are classified into three categories with respect their____

A. Cost value

B. Demand value

C. Turn over value

D. Mark up value

Question No:98 **(Marks:1)** **Vu-Topper RM**

If for path 1-3-4 times 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 id ture.

A. 1-3-4 is critical path

B. 1-2-4 is critical path

C. 1-2-3-4 is critical path

D. 1-4 is critical path

Question No:99 **(Marks:1)** **Vu-Topper RM**

In which of the following model the carrying cost per unit of time is reduced in the ratio (1-D/R):1?

A. Purchasing model without shortage
B. Manufacturing model without shortage
C. Purchasing model with allowed shortage
D. Manufacturing Model with allowed shortage

Question No:100 **(Marks:1)** **Vu-Topper RM**

The objective function and together from a linear programming problem.

A. A set off constraints
B. Unrestricted variables
C. Feasible region
D. Optimal solution

Question No:101 **(Marks:1)** **Vu-Topper RM**

Which of the following property must be satisfied by a linear programming model?

A. Sensitivity
B. Negativity
C. Additively
D. Probability

Question No:102 **(Marks:1)** **Vu-Topper RM**

In pert the possible variation in activity can be measured from------of the corresponding beta distribution.

A. Variance
B. Mean
C. Expected time
D. Standard deviation

Question No:103 **(Marks:1)** **Vu-Topper RM**

Which of the following is not a categories of the operation research (OR) techniques?

A. Linear mathematical programming technique
B. Feasible solution
C. Inventory techniques
D. Networking techniques

Question No:104 **(Marks:1)** **Vu-Topper RM**

In a project management if the critical activities of a network are delayed then

A. Project finish time have to extend
B. Project cost will increase
C. More resource has to employed
D. All above choices are equivalent

Question No:105 **(Marks:1)** **Vu-Topper RM**

EST and EFT of activities are calculated in

A. Forward pass
B. Backward pass
C. None of the above
D. Path does not affect

Question No:106 **(Marks:1)** **Vu-Topper RM**

_____may be less than most likely time estimate

A. Pessimistic time estimate
B. Smallest time estimate
C. Optimistic Time estimate
D. None of the above

Question No:107 **(Marks:1)** **Vu-Topper RM**

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

A. Dummy activity
B. Sequential activity
C. Critical activity
D. Cyclic activity

Question No:108 **(Marks:1)** **Vu-Topper RM**

The following network is an example of

A. Redundancy
B. Dangling
C. Cycling
D. Dummy

Question No:109 **(Marks:1)** **Vu-Topper RM**

Which one is best describe Micro Economic Planning?

A. Distribution of fertilizer
B. Improving the layout of a workshop in a company
C. Investment planning of the country
D. PERT

Question No:110 **(Marks:1)** **Vu-Topper RM**

If t0 = 6, tm = 12 and tp = 18, then Vt=

A. 12
B. 22
C. 4
D. 144

Question No:111 **(Marks:1)** **Vu-Topper RM**

Which inventory model also known as a saw tooth model?

A. Purchasing Model with no shortages
B. Purchasing Model with shortages

C. Manufacturing Model with no shortages
D. None of the above

Question No:112 (Marks:1) Vu-Topper RM

Manufacturing Model with shortages 61- For backward pass computations.

A. Earliest start time Latest start time
B. Earliest start time Latest start time
C. Earliest start time Latest start time = 0
D. Earliest start time Latest start time

Question No:113 (Marks:1) Vu-Topper RM

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

A. 4
B. 3
C. 7
D. 20

Question No:114 (Marks:1) Vu-Topper RM

In a quadratic programming problem unlike linear programming problem.

A. Only objective function is quadratic
B. Both objective function and constraints are quadratic
C. Only constraints are quadratic
D. At least one of objective function or constraint must be quadratic

Question No:115 **(Marks:1)** **Vu-Topper RM**

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

A. Early start and early finish
B. Late start and early finish
C. Early start and late finish
D. Late start and late finish

Question No:116 **(Marks:1)** **Vu-Topper RM**

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

A. Shortage cost
B. None of the above
C. Optimum Shortage (S*)
D. Economic Order Quantity. (Q*)

Question No:117 **(Marks:1)** **Vu-Topper RM**

Maximum Inventory. (I max.) 69- K= Z x (_ _ _)
Where K is called service factor

A. $\sqrt{\pi}/2$
B. $\sqrt{2}/\pi$
C. $\sqrt{2\pi}/3$
D. $\sqrt{3\pi}/2$

Question No:118 **(Marks:1)** **Vu-Topper RM**

Employs a different modeling and solution logic than linear programming

A. Transportation Model
B. Inventory Control Model
C. Dynamic Programming
D. None of above

Question No:119 **(Marks:1)** **Vu-Topper RM**

Critical path is obtained by connecting the jobs having

A. Activities having same EST and LST
B. Activities having same EFT and LFT
C. Activities having zero slack
D. All of the above

Question No:120 **(Marks:1)** **Vu-Topper RM**

In LP problems Additively means that

A. The effect of two different programs of production is the same as that of a joint program
B. The doubling (or tripling) the product will exactly double (or triple) the profit and the required resource.
C. Both (a)& (b)
D. None of the

Question No:121 **(Marks:1)** **Vu-Topper RM**

Two of the first steps of OR process encompass the actual use of OR techniques. These steps are

A. Model Construction and Model Solution
B. Observation and Implementation
C. None of the above
D. Definition of the problem and Model Solution

Question No:122 **(Marks:1)** **Vu-Topper RM**

Model Solution and Implementation of results

Let FS = Free Slack, TS = Total Slack, INDS = Independent Slack, then which relation is true

A. $TS \leq FS$
B. $INDS \leq FS$
C. $FS \leq TS$
D. Both (b) & (c)

Question No:123 **(Marks:1)** **Vu-Topper RM**

Standard Deviation S.D is

A. One sixth of the difference between pessimistic time estimates and optimistic time estimates

B. One sixth of the difference between pessimistic time estimates and most likely time estimates

C. One sixth of the difference between optimistic time estimates and most likely time estimates

D. One sixth of the difference between most likely time estimates and optimistic time estimates

Question No:124 **(Marks:1)** **Vu-Topper RM**

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.

A. 8th

B. 11th

C. 15th

D. 12^{th}

Question No:125 **(Marks:1)** **Vu-Topper RM**

A requirement for the definition of the problem in OR is that _____must be clearly defined which helps to focus attention on what the problem is

A. Objective

B. Subjective

Question No:126 **(Marks:1)** **Vu-Topper RM**

In a network flow diagram, time follows from_____

A. Left to right

B. Right to left

Question No:127 **(Marks:1)** **Vu-Topper RM**
In a national highway system intersection of two or more roads has the same analogy as the ____in the network flow diagram.

A. Node
B. Point

Question No:128 **(Marks:1)** **Vu-Topper RM**
In _____, activity time estimates are distributed according to beta distribution

A. PERT
B. Critical

Question No:129 **(Marks:1)** **Vu-Topper RM**
In a transportation problem the objective function 'Z' gives .

A. Total Cost of transportation
B. Total time of transportation

Question No:130 **(Marks:1)** **Vu-Topper RM**
In two phase method process, first phase the sum of artificial variables.

A. Minimize
B. Maximize

Question No:131 **(Marks:1)** **Vu-Topper RM**
Which of the following difficult may found while attempting an LP problem by M-method?

A. It often leads to infeasible
B. Computational error due to large value of m

Question No:132 **(Marks:1)** **Vu-Topper RM**
Dual of a Dual is--------.

A. Primal
B. Dual

Question No:133 **(Marks:1)** **Vu-Topper RM**

Shortcoming of Big M method is that the value of M could be _.

A. Very small

B. Very large

Question No:134 **(Marks:1)** **Vu-Topper RM**

In simple method to solve an LP problem gauss Jordan Elimination method demands that all the key column enters should be zero except.

A. 1st row entry

B. Key row

Question No:135 **(Marks:1)** **Vu-Topper RM**

Which of the following technique to solve the network flow diagrams is activity oriented?

A. Programmer evaluation and review technique

B. Critical path method

Question No:136 **(Marks:1)** **Vu-Topper RM**

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

A. If least objective function is non-linear

B. If both objective function and constraints are non-linear

Question No:137 **(Marks:1)** **Vu-Topper RM**

The amount of the inventory will always taken to be____.

A. Negative

B. Positive

Question No:138 **(Marks:1)** **Vu-Topper RM**
Solution region of the constraints 2x+3y>12 or 6x+9y=36 Will be the half plane bisected by 2x+3y=12.

A. Excluding
B. Including

Question No:139 **(Marks:1)** **Vu-Topper RM**
Solution region of the constraints :2x+3y>12 and 2x+3y<12 will be the. Point (6,4) Straight line:2x+3y-12

A. Empty set
B. All first quadrant

Question No:140 **(Marks:1)** **Vu-Topper RM**
Which of the following method follows iterative procedure to solve a linear programming problem?

A. Graphical
B. Algebraic

Question No:141 **(Marks:1)** **Vu-Topper RM**
Wilson's model (Purchasing model with no shortages) is of the ___ type.

A. Probabilistic
B. Deterministic

Question No:142 **(Marks:1)** **Vu-Topper RM**
Which of the following will be an example of degenerate basic feasible solution for an LP problem?

A. (2,3-1)
B. (0,2,1)

Question No:143 **(Marks:1)** **Vu-Topper RM**

Under which of the following condition to solve an LP by using two phase method we can't proceed for 2nd phase?

A. Object function of 1st phase has zero value

B. Object function of 1st phase has positive value

Question No:144 **(Marks:1)** **Vu-Topper RM**

Which of the following times are directly to the activity cost that is by reducing the activity duration the direct cost of the corresponding activity is increased?

A. PERT Times

B. CPM Times

Question No:145 **(Marks:1)** **Vu-Topper RM**

The first step in a problem-solving exercise in OR is the _____that exist in the system.

A. Construction of the model of problem

B. None of the these