USST 603 Sem VI Paper III Question Bank					
Sr. no.	**Question**	**option 1**	**option 2**	**option 3**	**option4**
1	The cost associated with acquiring or replenishing the stock for production is called	Purchase cost	Set up cost	Shortage cost	Inventory holding cost
2	The cost associated with unfulfilled demand is called	Purchase cost	Set up cost	Shortage cost	Inventory holding cost
3	Inventory holding cost is denoted by	C_0	C_3	C_2	C_1
4	Inventory set up cost is denoted by	C0	C3	C2	C1
5	The order cost per order of an inventory is Rs. 400/- with an annual carrying cost of R.s. 10 per unit. The economic order Quantity (EOQ) for an annual demand of 2000 units is	480	520	420	400
6	The order cost per order of an inventory is Rs. 400/- with an annual carrying cost of Rs. 10 per unit. The economic order	480	520	420	400

	Quantity (EOQ) for an annual demand of 2000 units is				
7	In deterministic inventory model if shortages not allowed and production is finite, the growth rate of the inventory will be	R – K	K – R	K - 2R	R - 2K
8	In deterministic inventory model, if production is finite,	Order size can be more than production size	Order size has to be less than production size	Order size can be more or less than production size	Order size is independent production size
9	____ is expressed as cost of keeping one unit of item in the inventory for one unit of time	Shortage cost	Inventory holding cost	Lead time	Set up cost
10	Shortage cost is a sort of	Penalty	Discount	Bonus	Incentive
11	Set up cost is expressed as	C1 per item	P per item	C3 per Set up	C2 per Set up
12	Holding Cost is denoted by	C1	P	C3	C2
13	In deterministic model of inventory where shortages are not allowed and replenishment is infinite, in usual notation	C2 infinity, K finite	C2 finite, K infinity	C2 finite, K finite	C2 infinity, K infinity
14	In deterministic model of inventory where shortages are allowed and replenishment is infinite, in usual notation	C2 infinity, K finite	C2 finite, K infinity	C2 finite, K finite	C2 infinity, K infinity
15	For deterministic model II of inventory, if shortages are not allowed, that is, if C2 is	Model III and IV	Model IV	Model III	Model I

	made infinity, model II becomes a limiting case of				
16	For model II of deterministic inventory, the quantity q ordered in one cycle is	Greater than optimum inventory level S	Lesser than optimum inventory level S	Equal to the optimum inventory level S	Greater or lesser than optimum inventory level S
17	In probabilistic models of inventory, probability is associated with the	Cost	Quantity	Time	Demand
18	In probabilistic models of inventory, ------ is variable	Cost of items	Quantity	Time	Demand
19	As life of equipment increases, its operational efficiency	increases	decreases	increases than decreases	neither increases nor decreases
20	With time, maintenance costs	increase	decrease	increases then decreases	neither increases nor decreases
21	Replacement of an item whose maintenance cost increases with time and money value does not changes, when time 't' is continuous variable then total cost incurred during n year will be	c-s+∫f(t)/n	c+s+∫f(t)	c-s+∫f(t)	c-s-∫f(t)
22	Replacement of an item whose maintenance cost increases with time and money value does not changes, when time 't' is continuous variable then total cost incurred during n year will be	c-s+∫f(t)/n	c+s+∫f(t)	c-s+∫f(t)	c-s-∫f(t)
23	Replacement of an item whose maintenance cost increases with time and	$C - R_i V^{i-1}$	$C + R_i V^i$	$C - R_i V^i$	$C + R_i V^{i-1}$

	money value also changes with time then present worth of expenditures in n year is				
24	Replacement of an item whose maintenance cost increases with time and money value also changes with time then present worth of expenditures in n year is	$C - R_i V^{i-1}$	$C + R_i V^{i}$	$C - R_i V^{i}$	$C + R_i V^{i-1}$
25	Present worth factor is	The present worth of Re 1 to be spent after 1 year	The present worth of Re 1 to be spent after n years	The present worth of Rs. 100 to be spent after 1 year	The present worth of Rs. 100 to be spent after n years
26	Present worth factor is	The present worth of Re 1 to be spent after 1 year	The present worth of Re 1 to be spent after n years	The present worth of Rs. 100 to be spent after 1 year	The present worth of Rs. 100 to be spent after n years
27	The present worth of Rs.100 to be spent after 3 years at the rate of 10% is	99.909	90.909	90.009	99.909
28	The amount received after selling a used item is called	Selling price	Salvage value	Discounted Value	Return price
29	The present worth of Rs.500 to be spent after 2 years at the rate of 10% is	423.113	431.223	413.223	414.332
30	The time elapsed from the point the machine fails to perform its function to the	Idle time	Busy Time	Extra time	Break Down time

	point it is repaired and brought into operating condition is known as				
31	In Replacement Theory, mortality theorem is used to find	Average age of items	Average number of failures per unit of time	Average Number of survivors per unit of time	Population size
32	If item is replaced immediately after it fails, then it is known as	Individual replacement	Group replacement	individual & group replacement	individual or group replacement
33	The relation between cost of individual replacement C1 and cost of Group replacement C2 is	$C_1 < C_2$	$C_1 > C_2$	$C_1 \neq C_2$	$C_1 \equiv C_2$
34	Staffing problem in organizations is studied under	Reliability theory	Replacement Theory	Inventory Theory	Simulation Theory
35	The relation between cost of individual replacement C1 and cost of Group replacement C2 is	$C_1 < C_2$	$C_1 > C_2$	$C_1 \neq C_2$	$C_1 \equiv C_2$
36	Out of Individual and Group Replacement, the better policy is	Individual	Group	Both are we equally good	Depends on the situation
37	The working of a real life system is studied under	Reliability theory	Replacement Theory	Inventory Theory	Simulation Theory
38	For Simulation, the random numbers are allotted to the values of the variable according to	Probability distribution	Equal distribution	Chronological occurance	Sampling distribution

39	In Generation of Random number by Midsquare method if a0=56 then a1 is equal to	1	3	13	31
40	In Generation of Random number by Midsquare method if $a_0 = 98$ then a_1 is equal to	9	8	60	96
41	If X follows exponential distribution with parameter Ө then random sample from this exponential population can be generated as	$X = log_e(\frac{1}{1-R})$	$X = \frac{1}{\theta} log_e(\frac{1}{1-R})$	$X = log_e(\frac{1}{1+R})$	$X = \frac{1}{2\theta} log_e(\frac{1}{1-R})$
42	If X follows exponential distribution with parameter Ө then random sample from this exponential population can be generated as	$X = log_e\left(\frac{1}{1-R}\right)$	$X = \frac{1}{\theta} log_e(\frac{1}{1-R})$	$X = log_e(\frac{1}{1+R})$	$X = \frac{1}{2\theta} log_e(\frac{1}{1-R})$
43	If X follows Uniform distribution with parameter (-5, 5) then x is equal to	10R	10-5R	10R+5	10R-5
44	If X follows Uniform distribution with parameter (5, 15) then x is equal to	10R	10-5R	10R+5	10R-5
45	Concept of Reliability is based on	Probability of time to failure	Probability of optimality of functioning	Probability of cost effectiveness	Probability of time management
46	A system has three subsystems, in series, subsystem one has reliability of 99.5% system 2 has the reliability of 98.7 % and system 3 has reliability of 97.3 %. The reliability of entire subsystem is	0.9455	0.9455	0.9555	0.9544
47	A system has three subsystems, in parallel, subsystem one has reliability of 99.5% system 2 has the reliability of 98.7 % and system 3 has reliability of 97.3 %. The reliability of entire subsystem is	0.9888	0.99999	0.9555	0.97777

48	The holding cost in an inventory problem is quoted for	All units annually	All units per unit time	Per unit per unit of time	Per unit annually
49	The main costs associated with running an Inventory is _______in number	2	3	1	4
50	The payment of a storekeeper is part of	Holding cost	Set up cost	Storage cost	Shortage cost
51	Cost of making of a phone call to place an order is part of	Holding cost	Set up cost	Storage cost	Shortage cost
52	Time between placing an order & actually receiving the order is called	Lead time	Shortage time	carrying time	Replenishment time
53	In inventory Theory,__________is a one time cost	Storage cost	Shortage time	Set up cost	Holding cost
54	The economic order quantity (EOQ) in first deterministic model of inventory is	$\sqrt{\frac{2Rc_3}{c_1}}$	$\sqrt{\frac{2Rc_1}{c_3}}$	$\sqrt{2Rc_1}$	$\sqrt{2Rc_3}$
55	Replenishment rate is finite means	k > infinity	k = infinity	k < infinity	k = 0
56	Replenishment rate is infinite means	Order of limited size can be placed	Order of any size can be placed	Order can be placed at any time	Order can be placed at regular intervals
57	In which model demand is certain	Deterministic	Probabilistic	EOQ	Costing System
58	In which model demand is uncertain	Deterministic	Probabilistic	EOQ	Costing System
59	In Inventory Model I, If r = 100 & t = 25 then EOQ is	2500	25	4	0.25
60	If R = 1000 & q = 250 then time between placing two consecutive order is	4	2.5	0.4	0.25
61	The rate at which the commodity in an inventory are procured is denoted by	Lead time	EOQ	Carrying cost	Replenishment
62	EOQ stands for	Equal Order Quantity	Economic Order Quote	Economic Outer Quantity	Economic Order Quantity

63	If customer is returned without fulfilling his demand	Holding Cost is incurred	Shortage Cost is incurred	Set up Cost is incurred	Production Cost is incurred
64	The time between placing two consecutive order is denoted by	p	k	L	t
65	Price Break means	Prices are increased with increasing quantity	Breaking of item is priced	Discount in price for increase in quantity is given	Prices are independent of quantity ordered
66	Inventory holding cost is denoted by	p	C3	C2	C1
67	If probability of failure of an item is due to random causes such as physical shock is called	progressive failure	Retrogressive failure	Random failure	Deterministic failure
68	Failure of an item due to causes such as gradual deterioration is called	Progressive failure	Retrogressive failure	Random failure	Deterministic failure
69	Replacement of an item whose maintenance cost increases with time and money value does not change, when time 't' is discrete variable then Average cost incurred during n year will be	[c-s+ Σ f(t)]/(n- 1)	[c-s+ Σ f(t)]/n	[c+s+ Σ f(t)]/n	[c-s+ Σ f(t)]/n+1
70	Value of Re. 1 to be spent one year from now, at present is called	Present waste function	Present waste factor	Present worth function	Present worth factor
71	p.w.f denotes	Present waste function	Present waste factor	Present worth function	Present worth factor
72	Group replacement is mostly applied to	Large number of low cost items	Small number of costly items	Large number of costly items	A few low cost items

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73	Discounts are normally associated with	Individual purchase	Defective item purchase	Bulk purchase	Small sized item purchase
74	If 'i' is the rate of interest then, present value of a rupee 50 spent 10 years from now, will be equal to	$50(1+i)^{-10}$	$50(1+i)^{10}$	$50(1-i)^{-10}$	$500(1-i)^{-10}$
75	If 'i' is the rate of interest then, present value of a rupee 1 spent n years from now, will be equal to	$(1+i)^{-n}$	$(1+i)^{n}$	$(1-i)^{-n}$	$(1-i)^{n}$
76	In model I of Replacement Theory, if An is the the maintenance cost then we replace the items	An=Rn=Rn+1	Rn<An>Rn+1	Rn<An<Rn+1	An>Rn>An+1
77	If items are replaced as and when they fail, it is called	individual replacement	Group replacement	individual & group replacement	individual or group replacement
78	If all items are replaced at the end of the optimal time period, irrespective of whether they failed or not are called	individual replacement	Group replacement	individual & group replacement	individual or group replacement
79	Replacement of an item whose maintenance cost increases with time and money value remain unchanged, average cost for previous n year will be	$\frac{C+\sum_{i=1}^{n} R_i}{n+1}$	$\frac{C+\sum_{i=1}^{n} R_i}{n}$	$\frac{C-\sum_{i=1}^{n} R_i}{n}$	$\frac{C\sum_{i=1}^{n} R_i}{\sum_{i=1}^{n} V^{i-1}}$

80	Cumulative probabilities are found by	summing all the probabilities associated with a variable.	simulating the initial probability distribution.	summing all the previous probabilities up to the current value of the variable.	summing all the probabilities not associated with a variable.
81	Probability can be obtained from frequency by	summing all frequencies' associated with a variable.	Adding consecutive frequencies	Dividing individual frequency by total frequency	Multiplying all frecuencies
82	In Simulation theory, for multiplicative congruential method, if Y_0=2, a=5, m=9 then Y_1 is	10	45	1	18
83	If X follows exponential distribution with mean 2 then Random observation x is equal to	$2log_e(\frac{1}{1-R})$	$\frac{1}{2}log_e(\frac{1}{1-R})$	$log_e(\frac{1}{1-R})$	$2log_e(\frac{1}{1+R})$
84	Consider the two components C1 and C2 with reliabilities R1 and R2 connected in series as, assume that R1 = 0.3 and R2 = 0.4. Calculate reliability of the series configuration	0.12	0.58	0.78	0.42
85	Consider the two components C1 and C2 with reliabilities R1 and R2 connected in parallel as, assume that R1 = 0.3 and R2 = 0.4. Calculate reliability of the parallel configuration	0.12	0.58	0.78	0.42

86	In different phases of the bathtub curve, which one is the phase of increasing failure rate? Choose the most appropriate alternative.	Infant mortality	Useful life	Wear out	Early failures
87	In different phases of the bathtub curve, which one is the phase of decreasing failure rate? Choose the most appropriate alternative.	Infant mortality	Middle life	Wear out	Early to middle life
88	In late life failures i.e. in phase III of bathtub curve, it experiences	increasing failure rate	decreasing failure rate	constant failure rate	no failures at all.
89	In early life failures i.e. in phase I of bathtub curve, it experiences	increasing failure rate	decreasing failure rate	constant failure rate	no failures at all.