JAMNALAL BAJAJ INSTITUTE OF MANAGEMENT STUDIES
UNIVERSITY OF MUMBAI
QUANTITATIVE TECHNIQUES IN MANAGEMENT
SEMESTER END EXAMINATION
MFM/MMM/MHRDM/MIM I SEMESTER I

M.MARKS 60   5th Nov 2012   DURATION 3 HRS.

Note: Question no 1 is compulsory. Attempt ANY FOUR from of Q. 2 to Q. 8
Calculators, graph papers and statistical tables are allowed.
Please make assumptions if any and write them clearly.

Q.1 (a) Evening shift resident doctors in a hospital work five consecutive days and have two consecutive days off. Their five days of work can start on any day of a week and the schedule rotates indefinitely. The hospital requires the following minimum number of doctors working for various days of a week:

Sun	Mon	Tue	Wed	Thurs	Fri	Sat
35	55	60	50	60	50	45

No more than 40 doctors can start their five working days on the same day. Formulate a linear programming programme to minimize the number of doctors employed by the hospital.

Q. 1 (b) The customer account at a certain departmental store have an average balance of Rs. 480 and a standard deviation of Rs. 160. Assuming that the account balances are normally distributed , what proportion of accounts is (i) over Rs. 600, (ii) between Rs. 400 and Rs. 500 and (iii) between Rs. 240 and Rs. 360?

$P(s) = e^{-j}$. $\dfrac{\lambda^x e^{-\lambda}}{x!}$

Q2 (a) In a certain locality, half the households is known to use a particular brand of soap. In a household survey, a random sample of 10 households are allotted to each investigator and 2048 investigators are appointed for the survey. How many investigators are likely to report (i) 3 users, (ii) not more than 3 users and (iii) at least 4 users? $P\left(\dfrac{H}{6}\right)$ $P(1$

Q. 2 (b) A Company which supplies needles to hospitals, would like to reduce its inventory cost by determining the optimal number of needles to be purchased from the manufacturer. The annual demand of needles is 10,000 units. The ordering cost is Rs. 200/= per order, and the holding cost is Rs. 0.50 per unit per year. (a) Calculate the optimal order size. (b) Assuming a 250 days per year, find the number of orders and the expected time between the orders. (c) Calculate the total inventory variable costs per year.

Q. 3 (a) The probability of breakdown of a high value electronic equipment due to power fluctuation is 0.02. The manufacturer has sold 50 of the equipment in the past six months. Calculate the probability that:

(i)   At least 3 break down due to power fluctuation
(ii)   At most 3 break down due to power fluctuation
(iii) None of them breakdown due to power fluctuation
(iv)   What is the expected number and standard deviation of equipment breaking down?

Q. 3 (b) A bank branch in a small suburb has a single teller counter. Customers arrive at the branch at a rate of 30 per hour and arrivals are Poisson distributed. The teller takes an average of 1.5 minutes to serve a customer and service time is exponentially distributed. Customers are served on first-come-first-served basis and customers wait if need be.

(i)   What is the probability that the counter is idle?
(ii)   Calculate the average number of customers waiting to be served?
(iii) On an average, how long does a customer wait before he is attended to be the teller?
(iv)   How much time does a customer spend in the bank on an average?
(v)   What is the average number of customers waiting to be served or being served?
(vi)   Suppose the flow of customers increases to 45 per hour. What will be the value of the various queue parameters?

Q. 4 (a) A hospital wants to purchase three types of medical equipment and there are five manufacturers who supply all the three types. However, the hospital has a policy of not buying more than one equipment from a manufacturer. The data relating to prices quoted by the different manufacturers for the three equipment are given below:

Manufacturer	Equipment I	Equipment II	Equipment III
A	30	31	27
B	28	29	26
C	29	30	28
D	28	31	27
E	31	29	26

Determine which manufacturer should be chosen for each equipment such that the total cost of the three equipment is minimized. Also determine the minimum total cost.

Q. 4 (b) During iteration, the following Simplex tableau was obtained for a maximization problem (X_1 and X_2 are the decision variables, while S_1, S_2, S_3 and S_4 are slack variables):

	c_i	3	5	0	0	0	0
Basis	Solution b	X_1	X_2	S_1	S_2	S_3	S_4
X_1	1	1	0	0	0	-1/2	1/2
S_2	2	0	0	0	1	1	-1
X_2	6	0	1	0	0	1	0
S_1	3	0	0	1	0	-1/2	-3/2
Z_j-C_j							

Answer the following:

a)   Is the solution optimal? Give reasons.
b)   What are the values of the decision variables according to this solution and what is the profit?
c)   Comment on the utilization of resources.
d)   Does the problem have an alternative optimum solution? Give reasons.
e)   The resource represented by S_3 is available at Rs. 10 per unit. Would you recommend obtaining the same? Explain.
f)   If the profit associated with X_1 has increased to Rs. 5 per unit, would you recommend revising the product mix? Explain.

Q.5 (a) The table below records transportation costs per unit of a product from origins O_1, O_2, O_3 and O_4 to destinations D_1, D_2, D_3, D_4 and D_5. The capacities of the four origins are respectively 55, 45, 30 and 50 while the requirements of the five destinations are respectively 40, 20, 50, 30 and 40. Employing Vogel's Approximation method, or otherwise, make the initial allocations to the origins to satisfy the requirements

of the destinations and test the optimality of these allocations. Use Modified Distribution method (MODI) for obtaining an optimal solution that would minimise the total cost of transportation.

Origin	Destination					Capacity
	D_1	D_2	D_3	D_4	D_5	
O_1	12	4	9	5	9	55
O_2	8	1	6	6	7	45
O_3	1	12	4	7	7	30
O_4	10	15	6	9	1	50
Requirement	40	20	50	30	40	

Find the total cost implied by the solution. Is the solution unique? If not, find an alternative solution as well.

Q.5 (b) The research department of Hindustan Lever has recommended the marketing department to launch a shampoo of three different types. The marketing manager has to decide one of the types of shampoo to be launched under the following estimated pay-offs (in millions of Rs) for various levels of sales:

Types of Shampoo	Estimated level of sale (Units)		
	15,000	10,000	5,000
Egg shampoo	30	10	10
Clinic shampoo	40	15	5
Deluxe shampoo	55	20	3

What will be the marketing manager's decision if (a) Maximin, (b) Maximax, (c) Laplace, and (d) Regret criterion is applied?

Q.6 (a) A dairy firm wants to determine the quantity of butter it should produce to meet the demand. Past records have shown the following demand pattern.

Quantity required (kg)   :   15   20   25   30   35   40   50
No. of days demand occurred   :   6   14   20   80   40   30   10

The stock levels are restricted to the range 15 to 50 kg due to inadequate storing facilities. Butter costs Rs. 40 per kg and sold at Rs. 50 per kg.

(i)   Construct a conditional profit table
(ii)   Determine the action alternative associated with the maximization of expected profit
(iii)   Determine EVPI.

Q.6 (b) Friendly's Department Store has been target of many shoplifters during the past month, but owing to increased security precautions, 250 shoplifters have been caught. Each shoplifter's sex is noted; also noted is whether the perpetrator was a first-time or repeat offender. The data are summarized in the table.

Sex	First-Time Offender	Repeat Offender	total
Male	60	70	130
Female	44	76	120
Total	104	146	250

Assuming that an apprehended shoplifter is chosen at random, find

(a)   The probability that the shoplifter is male.
(b)   The probability that the shoplifter is a first-time offender, given that the shoplifter is male.
(c)   The probability that the shoplifter is female, given that the shoplifter is a repeat offender.
(d).   The probability that the shoplifter is female, given that the shoplifter is a first-time offender.
(e)   The probability that the shoplifter is both male and a repeat offender.

Q. 7 (a) An aircraft emergency locator transmitter (ELT) is a device designed to transmit a signal in the case of a crash. The Altigauge Manufacturing Company makes 80% of the ELTs, the Bryant Company makes 15% of them, and the Chartair Company makes the other 5%. The ELTs made by Altigauge have a 4% rate of defects, the Bryant ELTs have a 6% rate of defects, and the Chartair ELTs have a 9% rate of defects (which helps to explain why Chartair has the lowest market share).
a. If an ELT is randomly selected from the general population of all ELTs, find the probability that it was made by the Altigauge Manufacturing Company. 0.8
b. If a randomly selected ELT is then tested and is found to be defective, find the probability that it was made by the Altigauge Manufacturing Company. 0.7032

Q.7 (b) Attempt using the Graphical Method the following problem:

Maximize $Z = f(x,y) = 10x + 12y$
subject to: $5x + 6y \le 60$
$8x + 4y \le 72$
$3x + 5y \le 45$
$x \ge 0, y \ge 0$

Q. 8 (a) The dozens of banana demanded in a canteen of a large organization are given below.

Demand Dozen	20	22	24	26	28	30
Probability	0.08	0.12	0.20	0.25	0.25	0.10

Use the series of random numbers to simulate the demand of banana for next 8 days.

Random Numbers	45	12	99	81	23	17	64	58

Q. 8 (b) A bookcase contains 6 different mathematics books and 12 different physics books. If a student selects 2 books randomly from this bookcase find the probability that
1) both are mathematics books
2) both are physics books
3) one book of each mathematics and physics

MFM/MMM/MHRDM/MIM I   SEMESTER I
QUANTITATIVE TECHNIQUES IN MANAGEMENT
DURATION 3 HRS   MAXIMUM MARKS 60

15TH November 2011

Note: Attempt ANY FIVE Questions from given EIGHT QUESTIONS.
All questions carry equal marks. Statistical tables, calculators are allowed. Graph papers will be provided on demand. Make necessary assumptions if any and write them clearly.

$e^{-t} = 0.01836$

Q.1 a A salesman estimates the probability of his selling the product to a prospective buyer is 0.4. If he fails to sell his product on the first contact, he contacts the buyer for the second time and feels that the probability of selling the product improves to 0.6. However, if he fails during the second contact too, he drops the idea of selling the product to this customer. Find the probability of his selling the product to the prospective buyer.

Q.1 b An investor has four options to invest Rs. 10,00,000 i.e. A,B,C and D. To play safe, he decides not to spend more than 50% of the total investment in B and /or in C. Investment A is very conservative and D is the most speculative of all the four investments. To avoid excessive speculation at least Re 1 must be invested in A for every three rupees invested in D. The expected returns on A, B, C and D are 10%, 12%, 14% and 16% respectively. The investor wishes to invest in such a way that he maximizes the total return on investment. Formulate a linear programming problem to estimate how much should he invest in each?

Q.2 a Solve the following LPP graphically:

Min $Z = 12x + 20y$

Subject to $x + y \geq 7$ $5x + 2y \geq 20$ $x, y \geq 0$

In the above problem if the objective function is to be maximized, what conclusion would you draw?

Q.2 b The incidence of occupational diseases in an industry is such that the workmen has 20% chance of suffering from it. What is the probability that out of 6 workmen at least 2 will have the diseases ?

Q. 3 a Given below is the simplex table for a maximization type of LPP·

B	Cb	X1	X2	S1	S2	b
X2	4	1	1	1	0	6
S2	0	1	0	-1	0	2
cj		3	4	0	0	
zj		4	4	4	0	24
Cj-Zj		-1	0	-4	0	

(1) Interpret the final Simplex table above
(2) Machine A (associated with slack S1) has to be shut down for repair for 2 hours next week . How much will be the reduction in profit ?
(3) What is the maximum you would be prepared to pay fro another hour (per week) of capacity each on machine A and B ?

Q.3 b Chemical products Ltd produces a compound which must be sold within the month it is produced , if the normal price of Rs 100 per drum is to be obtained. Any thing unsold in that month is sold in

different market for Rs 20 per drum . The cost price of drum is Rs. 55 per drum . During the last three years monthly demand of the drum was in the range of 10 to 15 per month .
(1) Prepare the appropriate pay off table
(2) Advice the management on the number of drums that should be produced next month using Laplace Principle .

Q.4 a Solve the following assignment problem by Hungarian assignment method.

Time (In minutes)

Worker	Job 1	Job 2	Job 3
A	4	2	7
B	8	5	3
C	4	5	6

Q.4 b   A doctor has decided to prescribe two new drugs to 200 heart patients as follows: 50 get drug A, 50 get drug B, and 100 get both. The 200 patients were chosen so that each had an 80 percent chance of having a heart attack if given neither drug. Drug A reduces the probability of a heart attack by 35 percent, drug B reduces by 20 percent, and the two drugs, when taken together, work independently. If a randomly selected patient in the program has a heart attack, what is the probability that the patient was given both drugs?

Q5 a) The table below records transportation costs per unit of a product from origins O1, O2, O3, and O4 to destinations D1, D2, D3, D4 and D5. The capacitates of the four origins are respectively 55, 45, 30 and 50 while the requirements of the five destinations are respectively 40, 20, 50, 30 and 40. Employing Vogel's Approximation method, or otherwise, make the initial allocations to the origins to satisfy the requirements of the destinations and the test the optimality of these allocations. Use Modified Distribution Method (MODI) for obtaining solution that would minimise the total cost of transportation.

Origin	Destination					Capacity
	D1	D2	D3	D4	D5	
O1	12	4	9	5	9	55
O2	8	1	6	6	7	45
O3	1	12	4	7	7	30
O4	10	15	6	9	1	50
Requirement	40	20	50	30	40	

Find the total cost implied by the solution. Is the solution unique? If not, find an alternative solution as well.

5 b) The Quality Manager of a biscuit factory is inspecting a batch of chocolate chip biscuits. If the production process is in control, the average number of chocolate chips per biscuit is 4.

a) What is the probability that in any biscuit inspected,

2

(i) fewer than 4 chips will be found? ·   (ii) Exactly 4 chips will be found?

(iii) Five or more chips will be found? b) What is the probability that no chips will be found in two biscuits?

c) What is the expected number and standard deviation of chocolate chips in a biscuit?

Q 6 a) The annual demand for an automobile component is 36000 units. The purchase price of the component is Rs.50 per unit and the carrying cost per year is 1 % of the inventory value. The lead time for the component is 5 working days and the ordering cost is Rs. 250 per order. The number of working days is 300 per year. Determine:

a) the Economic Order Quantity   b) the number of orders per year

c) The ordering and inventory carrying costs associated with ordering the EOQ?

d) The length of the inventory cycle?   e) The re- order point?

f) the savings achieved by ordering on EOQ basis as against the policy of ordering 4 times a year?

Q. 6 b) In the past several years, credit card companies have made aggressive attempts to solicit new accounts from students. A sample of 200 students at a college was taken and the following information was collected regarding the possession of a credit card:

Gender	Possessing a credit card		
	Yes	No	Total
Male	60	60	120
Female	15	65	80
Total	75	125	200

a. What is the probability of a student possessing a credit card?
b. What is the probability that a person selected is a male credit card holding student?
c. If a randomly selected student possesses a credit card, what is the probability that the student is a male?
d. What is the probability that a female student randomly selected has a credit card?
e. Are gender and possession of credit card statistically independent?

Q. 7 a A retail store at the Crowford Market dealing in Bakery items has one attendant who provides the goods to the customer one by one as and when they arrive. The owner sit at the counter and receives payment. Many a times he sees that there are customers waiting and some time of the day it is lull. He wants to make an assessment of the average waiting time of a customer. If the average waiting time of the customer is more than 15 minutes, he decides to hire a helping hand for the attendant. The inter arrival time and the serving time are observed on typical day. The data is as follows
Simulate the process for 10 rounds and suggest what the owner should do.

Interarrival time   5   8   10 in minute
Probability   0.2   0.6   0.2

Service time   10   12   14 in minutes
Probability   0.5   0.4   0.1

You may use the following set of random numbers for

3

Inter arrival time	68	9	64	73	14	43	52	84	18	13
Service time	34	16	4	40	99	72	7	73	46	9

Q. 7 b A movie is released on Friday and is run in a theatre for a period where the number of viewers i sufficient to make up the cost of running the movie. In 'Movie Stor Theatre' the number of week fc which the past few films had run are given in the table below

No of week	5	6	7	8
No. of films run successfully	1	4	3	2

The cost of running the film for a week is Rs 50,000 and revenue generated is Rs. 1,20,000. If the film i run for more than its demanded weeks the theatre is almost empty and it collects only Rs. 10,000 pe week.
How many weeks the film should be run so that the gain is the maximum? If the theatre operator want: to know about the interest of the movie goers in the film, how much budget he should allocate to get thi information?

Q. 8 a Indira Gandhi International Airport is a very busy airport in India. Almost all the major cities ii India and international destinations are connected to this airport. Because of this, the single run way i sometimes busy and hence there is congestion of airplanes. Hence the planes are kept rotating in the skies. The cost of an aero plane kept rotating is Rs. 3,00,000 per hour per airplane. To reduce the congestion Airport Authority of India is considering construction of another run way. The cost o construction is Rs. 1400 lakhs. If the amount of rotating cost for the next two months is more than the cost of construction then the authority is ready to undertake it immediately.
Average number of planes coming for flying or landing is 4 per hour and the average number of si planes can be made to either fly or land.
Should the airport Authority of India takeover the new run way project immediately?

Q. 8 b The popular Television serials are generally given a time slot of half an hour. But actual time for the story in the half an hour slot is normally distributed with a mean of 19 minutes and a standard deviation of 4 minutes. If a random serial episode is seen on a Monday evening , what is the probability that the actual time of the story is i) less than 20 minutes, ii) more than 23 minutes iii) is between 18 minutes to 22 minutes?

4

MMM MFM MHRDM MIM I   Semester I

M. Marks 100 ˙   Duration 3 hrs.

Note Attempt ANY FIVE questions from given 9 questions.
Make assumptions wherever necessary and write them clearly.

Q. 1 a An investor wishes to invest Rs 1,00,000 in fixed deposits, government bonds mutual funds and stocks. To avoid excessive investment he must not invest more than 50% of the total investment in Government bonds and /or mutual funds. He further decides that he must invest at least Rs 1 in fixed deposits for every Rs 3 invested in stocks. The anticipated returns on investments are

Fixed deposits	10%	mutual funds	14%
Government bonds	12%	stocks	16%

The investor wishes to know how much to invest in each instrument so that he will maximise the return on investment. Formulate this as Linear Programming Problem.

Q. 1 b In a factory burning out optical lenses, there is a small chance 1/500 for any lens to be defective. The lenses are supplied in packets of 10. Use Poisson distribution to calculate the approximate number of packets containing

i. no defective   ii. At least one defective in a consignment of 20000 packets.

Q. 2 a The owner of a small machine shop has four mechanics available to assign jobs for the day. Five jobs are offered with a expected profit in Rs. For each mechanic on each job as follows
Determine the assignment of mechanics to jobs that will result in maximum profit. Which job should be declined?

Mechanics	Jobs	A	B	C	D	E
1		62	78	50	101	82
2		71	84	61	73	59
3		87	92	111	71	81
4		48	64	87	77	80

Q. 2 b A municipal bond service has three rating categories (A.B, and C). Suppose that in the past year, Of the municipal bonds issued throughout the United States, 70% were rated A .20% were rated B, and 10% were rated C. Of the municipal bonds rated A, 50% were issued by cities, 40% by suburbs, and 10% by rural areas. Of the municipal bonds rated B, 60% were issued by cities, 20% by suburbs, and 20% by rural areas. Of the municipal bonds rated C, 90% were issued by cities, 5 % by suburbs, and 5% suburbs, and 5% by rural areas.

    a. If a new municipal bond is to be issued by a city, what is the probability that it will receive an A rating?

    b. What proportion of municipal bonds is issued by cities?

Q. 3 a .The following table shows all necessary information on the availability of supply to each warehouse, the requirement of each market and the unit transportation cost from each warehouse to each market :

Warehouse	Market				Supply
	P	Q	R	S	
A	6	3	5	4	22
B	5	9	2	7	15
C	5	7	8	6	8
Requirement	7	12	17	9	

/ /

(a) Find the solution to above transportation Problem by Vogel's Approximation method to minimize cost

(b) check the optimality of the solution obtained by above (a) (optimality Check only)

Q.3 b   Indian Airlines (Indian) operates five flights daily from Mumbai to Delhi   Suppose the Probability that any flight arrives late at Bangalore is 0.20. What is probability that none of the flights are late today? What is the probability that exactly two of the flights is late today?

Q.4 a A warehouse has one dock used to unload railroad freight cars. Incoming freight cars arrive during the night. It takes exactly half a day to unload a car. If more than two cars are waiting to be unloaded on a given day, some are postponed to the next day.

Past experience has indicated that the number of cars arriving during the night have the following frequency of occurrence:

Number of cars arriving.	0	1	2	3	4	5	6 or more Percentage of
time	0.23	0.30	0.30	0.10	0.05	0.02	0.00

Use simulation (perform 10 trials) to find out the average number of arrivals and the average number of trucks delayed to the next day. An extract from the table of random numbers is given below:

97	95	12	11	90	49	57	13	86	81
02	92	75	91	24	58	39	22	13	01
80	67	14	99	16	89	69	63	76	06
77	24	72	57	32	15	49	63	00	04
96	76	20	28	72	12	77	23	79	46

Q 4 b A pizza chain is evaluating a particular prospective site for setting up an outlet. It has to decide the size of the outlet should be small, medium or large or whether to build none. The market research team has made the following estimates of present value of annual profit in lakhs of Rupees for each size of outlet:

Size	Demand		
	Low	Medium	High
Small	4.8	3.2	3.0
Medium	-6.4	21.2	7.8
Large	-10	1.2	35.0
No restaurant	0	0	0

(i)   If the probabilities for low demand and medium demand are 42% and 36%, what should the decision be?

(ii)   Calculate EVPI.

Q. 5.   Hi-Fi produces two models of electronic gadgets that use resistors, capacitors   and chips. The following table summarises the data of the resource requirements, availability of the resources and the unit contribution of the models::

Requirement/ unit   Maximum

Resource	Model 1	Model 2	availability (units)
Resistors	2	3	1200
Capacitors	2	1	1000
Chips	0	4	800
Unit contribution(Rs.)	300	400	

$z = 300 X_1 + 400 X_2$

The company formulated the problem as a linear programming problem and obtained the following table in an iteration: (X1 and X2 are the number of units of models 1 and 2 and S1, S2 and S3 are the slack variables corresponding to the resources).

Basis	Cb	X1	X2	S1	S2	S3	Value
X1	300	1	0	-1/4	3/4	0	450
S3	0	0	0	-2	2	1	400
X2	400	0	1	1/2	-1/2	0	100
Z		0	0	125	25	0	175000

Answer the following questions based on the above table:

a) Is the above solution optimal? If not, derive the optimal solution.
b) Interpret the optimal solution.
c) Determine the status of usage of each resource.
d) In terms of the optimal profit, determine the worth of one resistor, one capacitor and one chip.
e) If the available number of resistors is increased to 1300 units, find the new optimum solution and profit.
f) If the available number of chips is reduced to 450 units, what will be the revised optimal mix and profit?
g) Find the increase/ decrease in the unit contribution of the models that will not impact the current optimal mix?
h) A new contractor is offering Hi- Fi additional resistors at Rs. 40 per resistor but only if Hi- Fi is ready to purchase at least 500 units. Should Hi- Fi accept the offer?

Q.6 a An oil company has recently acquired rights in a certain area to conduct surveys and test drilling to lead to lifting oil. The area is considered to have good potential for finding oil. At the outset, the company has a choice to conduct further geological tests or to carry out a drilling programme immediately. On the known conditions, the company estimates that there is a 70 : 30 chance of further tests showing a "success". Whether the tests show the possibility of ultimate success or not or even if no tests are undertaken at all, the company could still pursue its drilling programme or alternatively consider selling it rights to drill the area. Thereafter, however, if it carries out the drilling programme. the likelihood of final success or failure is considered dependent on its foregoing stages. Thus, if successful tests have been carried out, the expectation of success in drilling is given as 80 : 20. It the tests indicate 'failure' then the expectation of success in drilling given as 20 : 80. If no tests have been carried out at all, the expectation of success in drilling is given as 55 : 45. Costs and revenues have been estimated for all possible outcomes and the net present value of each is given below.

Outcomes	Net Present Value (Rs. Millions)
With prior tests	100
Without Prior tests	120

Failure

With prior tests	-50
Without prior tests	-40

Sale of exploitation rights

Prior tests show 'success'	65
Prior tests show 'failure'	15
Without prior tests	45

(i) Draw a decision tree diagram to represent the above information. Evaluate the tree in order to advise the management of the company on its best course of action.

Q 6 b A company has determined from its analysis of production and accounting data that, for a part number KC-438, the annual demand is equal to 10,000 units, the cost to purchase the item is Rs. 36 per order and the holding cost is Rs. 2/unit/year.

Determine

(a) What should the Economic Order Quantity be?
(b) What is the number of days' supply per optimum order?

Q.7a A businessman has 3 alternatives open to him each of which can be followed by any of the four possible events. The conditions payoffs (in Rs.) for each action even combinations are given below:

Alternatives	Payoffs conditional on events			
	a	b	c	d
A	7	0	-10	5
B	-4	11	18	-2
C	13	5	0	7

Find out which alternative should be adopted, if the business man adopts the minimax regret criterion.

Q. 7 b " Mr. Smith's gardener is not dependable; the probability that he will forget to water the rosebush during Smith's absence is 2/3. The rosebush is in a questionable condition, anyhow; if watered, the probability for its withering is ½; if it is not watered, the probability for its withering is 3/4. Upon returning, Smith finds that the rosebush has withered. *What is the probability that the gardener did not water the rosebush?"*

Q. 8 a The metropolitan Clinic provides low cost medical care for nonemergency patients. There is always one doctor on duty in the clinic. The visits to the clinic are not scheduled. The patients drop in at random. A proposal has been made that additional doctors be assigned to the clinic so that several patients can be treated simultaneously. Projecting the available data into next year, it appears that patients will arrive at an average rate of 2.5 per hour. A doctor requires an average of 20 minutes to treat each patient. The alternatives being considered are to continue having just one doctor; to add a second doctor or even a third. By adding one more doctor the service rate becomes 4 and by the introduction of the third doctor the service rate becomes 6. Suppose that the cost associated with having a doctor on duty is $20 per hour. The estimated loss of good will and future business to the clinic due to the time patients spend is $ 15 per patient per hour. Find the most desirable alternative and explain why.

Q. 8 b In studying the causes of power failures, these data have been gathered.
5% are due to transformer damage   80% are due to line damage
1% involve both problems
Based on these percentages, approximate the probability that a given power failure involves

    i.   · line damage given that there is transformer damage
    ii.   transformer damage given that there is line damage
    iii.   transformer damage but not line damage
    iv.   transformer damage given that there is no line damage
    v.   transformer damage or line damage

Q. 9 a Steve Gold man production foreman for the Florida Gold Fruit Company, estimates that the average sales of oranges is 4700 and a standard deviation of 500 oranges. Sales follow a normal distribution. What is the probability that the sales will be

    i. greater than 5500 oranges   ii. Greater than 4500 oranges
    iii. less than 4900 oranges   iv. between 4650 to 4950 oranges.

Q.9 b Solve the following using graph

Minimize $24X_1 + 28X_2$

Subject to $5X_1 + 4X_2 \leq 2000$ $X_1 \geq 80$ $X_1 + X_2 \leq 300$ $X_2 \geq 100$ $X_1, X_2 \geq 0$

$$X_1, X_2 \geq 0$$

JAMNALAL BAJAJ INSTITUTE OF MANAGEMENT STUDIES
UNIVERSITY OF MUMBAI
SEMESTER END EXAMINATION
MFM/ MMM/ MHRDM/ MIM I SEMESTER I
QUANTITATIVE TECHNIQUES IN MANAGEMENT
17 NOVEMBER 2009

Duration 3 hrs

M. Marks: 100

Note: Attempt **ANY FIVE** questions.
Use of pocket calculator, statistical tables is allowed.
All questions carry equal marks.
Make assumption if required and state them clearly.

Q.1 (a) Evelyn Parkhill is considering three possible ways to invest the $200,000 she has just inherited.

(1)   Some of her friends are considering financing a combined laundromat, video-game arcade, and pizzeria, where the young singles in the area can meet and play while doing their laundry. This venture is highly risky and could result in either a major loss or a substantial gain within a year. Evelyn estimates that with probability 0.6, she will lose all of her money. However, with probability 0.4, she will make a $200,000 profit.

(2)   She can invest in some new apartments that are being built in town. Within 1 year, this fairly conservative project will produce a profit of at least $10,000, but it might yield $15,000, $20,000, $25,000, or possibly even $30,000. Evelyn estimates the probability of these five returns at 0.20, 0.30, 0.25, 0.20, and 0.05, respectively.

(3)   She can invest in some government securities that have a current yield of 8.25 percent.

(a)   Construct a decision tree to help Evelyn decide how to invest her money.

(b)   Which investment will maximize her expected 1-year profit?

(c)   How high would the yield on the government bonds have to be before she would decide to invest in them?

(d)   How much would she be willing to pay for perfect information about the success of the laundromat?

(e)   How much would she be willing to pay for perfect information about the success of the apartments?

Q. 1 (b) A company manufactures around 150 mopeds. The daily production varies from 146 to 154 depending upon the Availability of raw materials and other working conditions.

production per day	146	147	148	149	150	151	152	153	154
probability	0.04	0.09	0.12	0.14	0.11	0.10	0.20	0.12	0.08

The finished mopeds are transported in a specially arranged lorry accommodating only 150 mopeds. Using following random numbers 80, 81, 76, 75, 64, 43, 18, 26, 10, 12, 65, 68, 69, 61, 57, simulate the process to find out:

(i)   What will be the average number of mopeds waiting in the factory?

(ii)   What will be the average number of empty spaces on the lorry?

Q.2 (a) A small industry finds from the past data that the cost of making an item is Rs. 25, the selling price of the item is Rs. 30 if it is sold within a week, and it could be disposed off at Rs. 20 per item at the end of the week if unsold. Frequency of weekly sales is given below:

Weekly Sales	:	<3	4	5	6	7	>8
No. of weeks	:	0	10	20	40	30	0

Find the optimum number of items per week the industry should make.

Q. 2(b) Braneast Airlines uses 500 taillights per year. Each time an order for taillights is placed, an ordering cost of Rs.5 is incurred. Each light costs 40 paise, and the holding cost is 8 paise/light/year. Assume that demand occurs at a constant rate and shortages are not allowed. What is the EOQ? How many orders will be placed each year? How much time will elapse between the placements of orders?

(b) Explain the rules regarding transfer of property in goods. ....(10)

Q4 (a) Explain the doctrine of ultra vires with reference to the case law. Do you think there is a need for this doctrine in the current scenario? ....(10)

(b) Explain the doctrine of 'indoor management' with reference to the case law. ....(10)

Q5 Describe the defining features of the following types of companies:

(a) Private Limited Company ....(5)

(b) Government Company ....(5)

(c) Foreign Company ....(5)

(d) Company Limited by Guarantee ....(5)

Q6 (a) Describe the compulsory clauses in the memorandum of association of a company. ....(10)

(b) Discuss the instances where the courts have lifted or pierced the corporate veil. ....(10)

Q7 Write short notes on any four of the following:

(a) Termination of offers ....(5)

(b) Undue influence..(5)

(c) Voidable contracts ....(5)

(d) Articles of association...(5)

(e) Breach v. anticipatory breach...(5)

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Q.3 (a) Sol O'Tarry, a prison administrator, had been reviewing the prison records on attempted escapes by inmates. He has data covering the last 45 years that the prison has been open, arranged by seasons. The data are summarized in the table.

Attempted Escapes	Winter	Spring	Summer	Fall
0	3	2	1	0
1-5	15	10	11	12
6-10	15	12	11	16
11-15	5	8	7	7
16-20	3	4	6	5
21-25	2	4	5	3
More than 25	2	5	4	2
	--	--	--	--
	45	45	45	45

(i) What is the probability that in a year selected at random, the number of escapes was between 16 and 20 during the winter?

(ii) What is the probability that more than 10 escapes were attempted during a randomly chosen summer season?

iii) What is the probability that between 11 and 20 escapes were attempted during a randomly chosen season? (Hint: Group the data together)

Q. 3 (b) An oil company is in the process of forming a high speed rescue unit to cope with emergency situations at its off- shore platforms. The rescue team consists of 6 personnel, who undergo comprehensive training in all specialist rescue activities for reasons of flexibility. They are to be assigned to the specialist tasks based on the marks they obtained in the training program for the various specialist tasks. The marks are given in the table below. Assign the personnel to the tasks in an optimal way, so as to maximize the total marks of the team.

	Trainee No.				
Specialist task	1	2	3	4	5
Unit Leader	21	5	21	15	15
Helicopter Pilot	30	11	16	8	16
First Aid	28	2	11	16	25
Drilling Technology	19	16	17	16	19
Fire Fighting	26	21	22	28	29

Q. 4 (a) The Quality Manager of a biscuit factory is inspecting a batch of chocolate chip biscuits. If the production process is in-control, the average number of chocolate chips per biscuit is 6. What is the probability that in any biscuit inspected,

(i) No chips will be found?   (ii) Fewer than 5 chips will be found?

(iii) Five or more chips will be found?   (iv) Four or five chips will be found?

Q. 4 (b) The Nagar Seva Co- operative Bank is planning its credit operations for the next year. The Bank advances five types of loans, which give varying returns. The type of loan and the average annual return (in percent) are given below:

Type of Loan	personal	foreign travel	automobile	second home Mortgage	first home mortgage
Average annual return	15%	12%	9%	10%	8%

Mandatory requirements and Bank's policy place the following limits upon the amounts of various types of loans: Personal loans cannot exceed 10% of the total amount of loans. The amount of personal and foreign travel loans together cannot exceed 20% of the total amount of loans. First home mortgage loans must be at least 40% of the total home mortgage loans and at least 20% of the total amount of loans. Automobile loans cannot exceed amounts advanced as home loans. The Bank has a maximum availability of funds of Rs. 15 crore. Formulate this problem as a linear programming problem to maximize revenue from loan interest. Do not solve.

Q. 5 (a). During iterations using the Simplex method, the following tableau was obtained. Fill in the values for the starred positions. (X1, X2,, X3 and X4 represent the number of units of four models of a washing machine while X_5, X_6, X_7 and X_8 are the slack variables representing production hours, testing hours, raw material 1 and raw material 2)

			400	600	800	1000	*	*	*	*
C_B	X_B	RHS	X1	X2	X3	X4	X5	X6	X7	X8
*	X8	50	-1/5	*	1/5	*	1/10	-1/2	*	*
*	X2	125	1/2	*	0	*	1/4	-3/4	*	*
*	X7	5	3/10	*	1/5	*	-3/20	1/4	*	*
*	X4	50	1/5	*	4/5	*	-1/10	1/2	*	*
	Cj- zj		*	*	*	*	*	*	*	*

Answer the following questions, giving reasons where required:

(i)   Is the solution optimal? If not work out the optimal solution.
(ii)   Interpret the optimal solution. Comment on the meaning of the slack variables.
(iii)   Is there more than one optimal solution?
(iv)   What is the marginal value of an additional hour of production time? Over what range of production time is this marginal value valid?
(v)   Suppose 80 additional hours of test time can be obtained from outside for Rs. 40 per hour. Should the management obtain the additional test time? What will be the increase in profit?
(vi)   If the management wants to hike the price of the model X1 so that the marginal profit increases from Rs. 400 to Rs. 450. What would be the change in the production plan?
(vii)   Suppose the management is considering the introduction of another product using the same resources. The new product requires 8 production hours, 3 testing hours, 5 units of raw material 1 and 16 units of raw material 2 and will yield a contribution of Rs. 400/- per unit. Should the new product be introduced?

Q. 6 (a) A new television series is to be shown. A broadcasting executive feels that his uncertainty about the ratings which the show will receive in its first month can be represented by normal distribution with a mean of 18.2 and a standard deviation of 1.6.

i) What is the probability that the television rating will be more 18? ii) What percentage of the times the rating will be at the most 19.8? iii) What is the chance of getting the rating between 18 and 20? iv) According to this executive, the probability is 0.01 that the rating will be less than what number?

Q. 6 (b) A duplicating machine maintained for office use is used and operated by people in the office who need to make copies mostly secretaries. Since the work to be copied varies in length of pages of the original and copies required. The service rate is exponentially distributed with a mean of 10 jobs per hour and the requirement over the entire day of eight hours is poisson with a mean arrival rate of 5 per hour. Several people have noted that a waiting line develops occasionally and have questioned the policy of maintaining only one unit. If the time of the secretary is valued at Rs. 350 per hour, make the analysis to find

     i) equipment utilization   ii) the percent of time the arrival has to wait

Max marks 100

Duration 3 hrs
Nov 2008

Note: Attempt Any Five questions
 All questions carry equal marks
 Use of pocket calculator and statistical tables are allowed.

Q.1 (a) The Clear – Vision Television Company manufactures models A, B and C which have profits 200 , 300 and 500 per piece , respectively . According to the production license the maximum weekly production requirements are 20 for model A , 15 for B and 8 for C . The time required for manufacturing these sets is divided amongst following activities:

Activity	Model A	Model B	Model C	Total time available
Manufacturing	3	4	5	150
Assembling	4	5	5	200
Packing	1	1	2	50

Formulate the production schedule as LPP to maximize total profit.

Q.1 (b) Obtain the EOQ (Economic Order Quantity) and the total variable cost associated with the policy of ordering quantities of that size, reorder level , using the following data :

Annual Demand	= Rs.50000
Ordering Cost	= Rs.200 per order
Inventory Carrying Cost	= 20% of average inventory value
Unit cost	= Rs. 25
Lead time	= 5 days
Year	= 250 days

Q. 2 (a) Plastic bags used for packaging produce are manufactured so that the breaking strength of the bag is normally distributed with a mean of 5 pounds per square inch and a standard deviation of 1.5 pounds per square inch.

 (i) What is the probability that a randomly chosen bag has a breaking strength between 4.1 and 5.5 pounds per square inch?

 (ii) If the minimum acceptable breaking strength is 2 pounds per square inch, what proportion of the bags are accepted?

 (iii) What percentage of bags have a breaking strength between 5.5 and 7.5 pounds per square inch?

Q. 2 (b) Sanshodhan Solutions is considering the development of a new multi- lingual vernacular word processing software for PCs. The company has the choice of producing a highly complex version of the software for 6 languages which can handle inter- lingual translation also. Alternatively, it can produce a simple version separately for each language. Another option the company has is to produce a medium capability software which can be used for 4 languages but with limited translation capability. Sanshodhan has determined the following payoffs for the three alternatives under different economic conditions:

Payoffs (Rs. Lakhs)

| | Alternatives | | |
Demand scenario	Complex	Medium	Simple
High	85	60	20
Average	25	30	15
Low	-30	0	10
Very low	-44	-12	6

Using each of the La Place, maximax and Maximin criteria, what should the company decide? hat should be the decision using the Hurwicz criterion with an optimism index of 0.6?

Q 3. A company has four salesman to be assigned to four different territories .The monthly increases, estimated for each salesman in different territories (in lakh Rupees) , are shown in the table below:

| | Sales territories | | | | |
	S1	S2	S3	S4	S5
Salesman's					
A	75	80	85	70	90
B	91	71	82	75	85
C	78	90	85	80	80
D	65	75	88	85	90

Suggest Optimal assignment for the salesman . Which sales territory will remain unassigned? What will be the maximum sales increase per month?

Q.4. A Steel Company has three open – hearth furnaces and five rolling mills . Transportation cost (Rs. Per quintal) for shipping steel from furnaces to rolling mills are shown in the following table :

	M1	M2	M3	M4	M5	Supply
F1	4	2	3	2	6	8
F2	5	4	5	2	1	12
F3	6	5	4	7	7	14
Demand	4	4	6	8	8	-

Obtain the optimum transportation schedule to minimise the transportation cost .

Q.5   A company manufactures and sells three models of large sized pressure cookers for canteen use. While market demands pose no constraints, supplies of aluminum limited to 750 kgs per week and availability of machine time limited to 600 hours per week restrict the product-mix. The resource usage of the three models and their profitability are given below:

| | Model | | |
	M_1	M_2	M_3
Aluminium/unit	6	3	5
Machine-time/init	3	4	5

Contribution Rs/unit		60		20		80	

a) Formulate the problem as an LPP and in the process of getting optimal solution, using the simplex method following table is obtained.

C		60	20	80	0	0	
Basis	Cb	X1	X2	X3	S1	S2	b
X1	60	1	-1/3	0	1/3	-1/3	50
X3	80	0	1	1	-1/5	¼	90
Zj-Cj		0	40	0	4	12	10200

b) Using the information in optimal solution tableau, determine whether and how the current solution would be sensitive to the following changes. Treat each of the conditions given below independently.

   i) An additional 150 kg of aluminum would become available.
   ii) The machine hours available would reduce from current level of 600 hours to 450 hours.
   iii) Following a reduction in selling price of M3, its contribution margin decreases by Rs.15.
   iv) What minimum contribution requiring 3 kg of aluminum and 3 hours of machine time per unit, with an estimated unit contribution of Rs.40. Would it be worthwhile manufacturing this new model.

Q. 6 (a) 60% of companies in an industry have a lawyer on their board, while 40% of them have a banker on their board and 15% have an academician. 20% have both a lawyer and a banker, 5% have a banker and an academician, and 10% have a lawyer and an academician. 4% have all three.

What is the probability that a company in the industry has at least one of the above categories of professionals on its board?

What is the probability that a company has none of these categories of professionals on its board?

Q. 6 (b) Because of recycling campaigns, a number of empty soda bottles are being returned for refilling. It is found that 10% of the bottles so returned are chipped and have to be discarded. In the next crate of 15 bottles,

   (i) What is the probability that none will be chipped?
   (ii) What is the probability that 4 or more will be chipped? !- ≤ ≥
   (iii) How many chipped bottles would you expect? ⋅ ∶⋅⋅⋅

Q.7 (a) A company manufactures two kinds of machines, each requiring a different manufacturing technique. The deluxe machine requires 18 hours of labour, 9 hours of testing, and yields a profit of Rs.400. The standard machine requires 3 hours of labour, 4 hours of testing, and yields a profit of Rs.200. There are 800 hours of labour and 600 hours of testing available each month. A marketing forecast has shown the monthly demand for the standard machine to be no more than 150. The management wants to know the numbers of each model to produce monthly that will maximize total profit. Formulate and solve this as a linear programming problem.

Q.7 (b) A dairy firm wants to determine the quantity of butter it should produce to meet the demand. Past records have shown the following demand pattern.

Quantity required (kg)	:	15	20	25	30	35	40	50
No.of days demand occured:		6	14	20	80	40	30	10

The stock levels are restricted to the range 15 to 50 kg due to inadequate storing facilities. Butter costs Rs.40 per kg and sold at Rs.50 per kg.

   i) Construct a conditional profit table
   ii) Determine the action alternative associated with the maximization of expected profit
   iii) Determine EVPI.

Q.8 (a) Arrival rate of telephone calls at a telephone booth is according to Poisson distribution with an average time of 9 minutes between two consecutive arrivals. The length of telephone call is assumed to be expentially distributed with mean 3 minutes

    a) Determine the probability that a person arriving at the booth will have to wait.

    b) Find the average queue length that is formed from time to time.

    c) Telephone company will install a second booth when convinced that an arrival would expect to have to wait at least 4 minutes for the phone. Find the increase in flow of arrivals which will justify a second booth.

    d) What is the probability that an arrival will have to wait for more than 10 minutes before the phone is free?

    e) What is the probability that he will have to wait for more than 10 minutes before the phone is available and the call is also complete?

    f) Find the fraction of the day that the phone will be in use.

Q.8 (b) Friendly's Department Store has been the target of many shoplifters during the past month, but owing to increased security precautions, 250 shoplifters have been caught. Each shoplifter's sex is noted; also noted is whether the perpetrator was a first-time or repeat offender. The data are summarized in the table.

Sex	First-Time Offender	Repeat Offender
Male	60	70
Female	44	76
	104	146

Assuming that an apprehended shoplifter is chosen at random, find

    a) The probability that the shoplifter is male.

    b) The probability that the shoplifter is a first-time offender, given that the shoplifter is male.

    c) The probability that the shoplifter is female, given that the shoplifter is a repeat offender.

    d) The probability that the shoplifter is female, given that the shoplifter is a first-time offender.

    e) The probability that the shoplifter is both male and repeat offender.

Q.9 A firm has a single channel service station with following empirical data available to its management/

    i)   The mean arrival time is 6.2 minutes

    ii)   The mean service time is 5.5 minutes

    iii) The arrival and service time probability distribution are as follows:

Arrivals (minute)	Probability	Service time	Probability
3-4	0.05	3-4	0.10
4-5	0.20	4-5	0.20
5-6	0.35	5-6	0.40
6-7	0.25	6-7	0.20
7-8	0.10	7-8	0.10
8-9	0.05	8-9	0.00

The queuing process begins at 10.00 am and proceeds for nearly 2 hours. An arrival goes to the service facility immediately if it is empty otherwise it will wait in a queue. The queue discipline is – 'First Come-first served'. If the attendant's wages are Rs.8 per hour and customer's waiting time costs Rs.9 per hour, would it be an economical proposition to engage second attendant? Answer on the basis of Monte-Carlo simulation technique. (you may use the following figures based on the simulated period of 2 hours).

Random no. for arrivals: 44,84,82,50,83,40,96,88,16,16,97,92,39,33,83,42,16,07,77,66

Random no. for service : 50,95,58,44,77,11,08,38,87,45,09,99,81,97,30,36,75,72,79,83.

MMM/MFM/ MHRDM/MIM — Principles of Management

60 marks

2 Hours

22/11/08

ANSWER ANY THREE QUESTIONS

Q1. Explain the steps that go in the planning process (20 marks)

Q2. What principles has Fayol given to management (20 marks)

Q3. How is 'Motivation' a basic instrument of getting work done, Explain in detail any two motivation theories (20 marks)

Q4. Explain any three types of departmentation followed by companies (20 marks)

Q5. What are the aspects that go into the control process (20 marks)

Q6. Write short notes (Any 2)
- a) M.B. O.
- b) Span of management control
- c) F. Taylor

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JAMNALAL BAJAJ INSTITUTE OF MANAGEMENT STUDIES
UNIVERSITY OF MUMBAI
SEMESTER END EXAMINATION
QUANTITATIVE METHODS FOR MANAGEMENT
MHRD/MFM/MMM/MIM I SEM I

Duration 3 hrs

Max marks 100   19th Nov 2007

Note: Attempt **Any Five questions**
All questions carry equal marks
Use of pocket calculator and statistical tables is allowed.
Graph papers will be provided on request
Write assumptions clearly if any.

Q.1. (a)   A company solicits bids on each of four projects from five contractors. Only one project may be assigned to any contractor. The bids received (in thousand rupees) are given in the accompanying table .   **Contractor**

Projects	A	B	C	D	E
I	18	25	22	26	25
II	26	29	26	27	24
III	28	31	30	40	31
IV	26	28	27	26	29

Determine the optimal assignment of the projects to various contractors to minimise the total achievable cost .

Q. 1 (b) The probability of that a contractor will get a plumbing contract is 2/3 and the probability that he will not get an electric contract is 5/9 . If the probability of getting at least one contract is 4/5 , what is the probability that the he will get both ?

Q.2. A Company is spending Rs. 1200 on transportation of its units from three plants to four distribution centers. The Supply and demand of units with unit cost of transportation are given as under :   **Distribution Centers**

Plants	D1	D2	D3	D4	Supply
P1	20	30	50	17	7
P2	70	32	40	60	10
P3	40	12	60	25	18
Demand	5	8	7	15	

What can be maximum saving by optimal scheduling of the transportation to minimise total cost ?

Q.3 (a) The overall percentage of failures in a certain exam is 40. What is the probability that out of group of 7 candidates (1) at least 3 passed the examination, and (2) at most 3 passed the examination?

$^nC_x \cdot p^x$

Q. 3 (b) A publishing house purchases 2000 units of a particular item per year at a unit cost of Rs. 20. The ordering cost is Rs. 50 per order and the inventory carrying cost is 25 percent of the inventory value. Find the optimal order quantity and minimum total cost including purchase cost. If a 3 % discount is offered by the supplier for purchase in lots of 1000 or more, should the publisher house accept the proposal?

Q.4 At a telephone booth, customers arrive with an average time of 1.2 time units between two arrivals. Service times are assumed to be 2.8 time units. Simulate the system for 12 time units by assuming that the system starts at $t = 0$. What is the average waiting time per customer? Simulation

Q.5 (a)Solve the following Linear Programming Problem by graphical method

$$\text{Maximise } z = x_1 - 3x_2$$
$$\text{subject to } x_1 + x_2 \le 300$$
$$x_1 - 2x_2 \le 200$$
$$2x_1 + x_2 \ge 100$$
$$x_2 \le 200$$
$$x_1, x_2 \ge 0$$

Q.5 (b)Textbook authors and publishers work very hard to minimize the number of errors in a text. However, some errors are unavoidable. Mr. J.A. Carmen, statistics editor, reports that the mean number of errors per chapter is 0.8. What is the probability that there are less than 2 errors in a particular chapter? Poisson 0.81 0.1912

Q.6 (a)A farmer has a two acre farm. He can sell all the tomatoes, drumstick or radishes he can raise. The price he can obtain is Re.1.00 per kg. for tomatoes, Re.0.75 for a head of drumstick and Rs.2.00 per kg. for radishes. The average yield per acre is 2,000 kg. of tomatoes, 3,000 heads of drumsticks, and, 1,000 kg. of radishes. Fertilizer is available at Rs.0.50 per kg. and the amount required per acre is 100 kg. each for tomatoes and drumstick, and 50 kg. for radishes. Labour required for sowing, cultivating and harvesting per acre is 5 man-days for tomatoes and radishes and 6 man-days for drumstick. A total of 400 man-days of labour are available at Rs.20.00 per man-day. Formulate this problem as a linear programming model to maximise the farmer's total profit.

Q.6 (b)A manufacturer makes a product, of which the principal ingredient is a chemical X. At the moment, the manufacturer spends Rs.1000 per year on the supply of X but there is a possibility that the price may soon increase to four times its present figure because of a worldwide shortage of the chemical. There is another chemical Y, which the manufacturer could use in conjunction with a third chemical Z, in order to give the same effect as chemical X. Chemicals Y and Z would together cost the manufacturer Rs.3000 per year; but their prices are unlikely to rise. What action should the manufacturer take? Apply the maximin and minimax regret criteria for decision making and give two order certainty sets of solutions.

Q. 7 (a) Company records show that the weekly distance traveled by their salesmen is normal with mean 800 miles and standard deviation 90 miles. The Sales Manager considers that salesmen who travel less than 600 miles in one week are performing poorly.

(i) If the Company employs 200 salesmen, how many would be expected to perform poorly in a particular week?

— (ii)   What percentage of salesmen cover between 700 to 950 miles per week?

(iii)   The Sales Manager wishes to identify the number of miles traveled in one week above which 10% of the salesmen are expected to travel. What weekly mileage is this?

Q. 7 (b) Ace Travel Agents has one reservation clerk on duty at a time. He handles information about flight schedules and makes reservations. All calls to Ace are answered by an operator. If the caller requests information or reservations, the operator transfers the call to the reservation clerk. If the clerk is busy, the operator asks the caller to wait. When the clerk becomes free, the operator transfers the call of the person waiting the longest to him. Arrival of calls follows a Poisson process and the service time of the reservations clerk is exponentially distributed. Calls arrive at the rate of 10 per hour, and the reservations clerk can service a call in 4 minutes on an average.

a)   What is the average number of calls waiting to be connected to the reservations clerk?

b)   What is the average time a caller must wait before reaching the reservations clerk?

c)   What is the average time for a caller to complete his transaction (ie. From the time the call comes in till he completes his transaction with the clerk)?

d)   What will happen if the average number of calls arriving increases to

(i) 15 per hour? (ii) 17 per hour?

Q. 8 (a) A florist orders and receives batches of a dozen roses early in the morning each day. He sells them in dozens only and does not sell them in individual units. The cost per dozen is Rs. 50 and he sells a dozen for Rs. 90. Any unsold roses at the end of the day have to be thrown. Also he estimates that if he has to turn away a customer because of insufficient stock, the customer would go to his competitor once more (for his next requirement) on an average. customer to his competitor for another week resulting in a loss of Rs. 40 per dozen. Based on the last year's statistics, the florist estimates the daily demand for roses in dozens as follows:

Demand	Probability of demand
15	0.40
16	0.30
17	0.20
18	0.10

(i)   How many dozens of roses should the florist stock each day so as to maximise his profits in the long run?

(ii)   What is EVPI?

Q. 8 (b) You are considering the purchase of stock in XYZ corporation. You feel that if the sensex rises next year, there is 85% chance that the XYZ stock will go up. On the other hand, if the sensex does not rise, the chances that XYZ stock goes up is estimated as 10%. Market analysts feel that there is a 70% probability that the sensex will rise next year and 30% probability that it will not. If at the end of the year, you find that XYZ stock has gone up, what is the probability that the sensex had not risen?

Q. 9. A manufacturing company sells 3 products, each of which requires three process operations- machining, assembly and packaging. Data concerning the availability of time at its three operational departments is given below:

Product	Machining	Department Assembly	Packaging	Profit per unit Rs.
A	1	3	2	4

B	3	4	1	8
C	2	2	2	6
Hours available	160	120	80	

While formulating and solving this as a linear programming problem, the following Simplex table was obtained:

C_j	Basis	RHS	X1	X2	X3	S_1	S_2	S_3
120	S2	160/3	-5/3	0	0	1	1	-2/3
0	X2	40/3	1/3	1	0	0	0	-1/3
150	X3	380/9	5/9	0	1	1/6	0	380/9

(i)   Is the solution optimal? If not work out the optimal solution.

(ii)   Interpret the optimal solution. Comment on the meaning of the slack variables.

(iii)   Is there more than one optimal solution?

(iv)   What is the marginal value of an additional hour of machining? An additional hour of assembly? An additional hour of packaging?

(v)   Suppose production time can be increased in any of the 3 departments by hiring contract workers. In which department(s) should the management deploy contract staff?

(vi)   Suppose 20 additional packaging hours can be obtained by re- adjusting departmental timings at an additional cost of 50 p. per hour. Should the management obtain the additional packaging hours? What will be the increase in profit?

(vii)   If there is a reduction in the market price of X3 so that the profit has fallen to Rs. 5, what would be the change in the optimal production plan?

JAMNALAL BAJAJ INSTITUTE OF MANAGEMENT STUDIES
UNIVERSITY OF MUMBAI
SEMESTER END EXAMINATION
QUANTITATIVE METHODS FOR MANAGEMENT
MHRD/MFM/MMM/MIM I SEM I

Max marks 100

Duration 3 hrs

16th Nov 2006

Note: Attempt Any Five questions

All questions carry equal marks

Use of pocket calculator and statistical tables is allowed.

$e^{-12.5} = 0.00000372665$, $e^{-10} = 0.0000453999$

Q.1. a) A dispatcher of the police department has received four request for police assistance. Currently , six patrol –cars are available for assignment and the estimated time (in minutes) are shown in the table that follows:

| Incident | Patrol unit | | | | | |
	1	2	3	4	5	6
I	6	5	3	4	5	6
II	8	6	2	3	7	6
III	4	4	7	6	5	5
IV	3	7	9	8	4	7

(1) Which patrol should respond ?

(2) What will be the average response time?

(b) A candidate is selected for interview for 3 posts . For the first post there are 3 candidates , for the second there are 4 and for the third there are 2. What is the probability of his getting at least one post?

Q.2. A Company has three Sources of manufacturing the same commodity, which are required to be transported to meet the demands in four destinations . The supplies and demands and also the cost of transportation from source to destination in rupees per unit are given in the following table :

| Source | Destinations | | | | Supply |
	1	2	3	4	
1	15 ^{10}	18 ^{5}	22 ^{25}	16 ^{r}	30 0
2	15	19.	20 ^{5}	14 ^{35}	40 –2
3	13 ^{10}	16 ^{10}	23	17	30 –2
Demand	20	20	25	35	100

15   18   22   16

(1) Find the optimum solution

(2) Is the optimum solution unique ?

(3) If no find alternate optimum solution.

Q.3 (a) Indian Airlines (Indian) operates five flights daily from Mumbai to Bangalore. Suppose the probability that any flight arrives late at Bangalore is 0.20. What is probability that none of the flights

are late today ? What is the probability that exactly one of the flights is late today? Explain what probability distribution you used and why?

Q.3 (b) Using the following data, obtain the EOQ (Economic Order Quantity) and the total variable cost associated with the policy of ordering quantities of that size.

Annual Demand	= Rs.20000
Ordering Cost	= Rs.150 per order
Inventory Carrying Cost	= 24% of average inventory value

With the help of Quantity – cost curve, explain the significance of EOQ.

Q.4. Discuss Monte Carlo Simulation. Illustrate how you would use it in one of the following two situations.

(i)   Queuing   or   (ii) Inventory Control

OR

Q. 4 Palm Village Clinic employs one secretary, who handles all the appointments for several doctors in the clinic. Incoming alls are answered by switch- board operator. If caller wants a doctor appointment, the call is transferred to the secretary. If the secretary's line is busy, the operator asks the caller to wait. When the secretaries line become free, the operator transfers waiting calls on first called first served basis. The calls for appointments come in at a rate of 10 per hour, according to the following probability distribution.

Time between two consecutive calls	4	5	6	7	8
Probability	0.1	0.15	0.50	0.15	0.10

The time in minutes it takes for the secretary to arrange an appointment varies according to the following probability distribution

Length of time to make an appointment	3	4	5	6
Probability	.01	.09	.8	.1

Use simulation to predict the arrivals of 10 calls and their service times to determine the following
  i)   The probability that a person calling for an appointment will have to wait before reaching secretary
  ii)   The average length of time a caller must be on the phone to receive an appointment.
  iii) The average number of callers waiting to have their calls transferred to the secretary.
You may use the below sets of random numbers.

10	76	87	20	42	98	40	68	85	84
98	37	55	21	56	17	37	99	34	56

Q. 5 (A) An insurance company states that 10% of all fire insurance claims are fraudulent. Suppose the company is correct, and that it receives 125 claims.

    a. What's the probability that at least 15 claims are fraudulent?
    b. What's the probability that less than 10 claims are fraudulent?

Q. 5 (b) O'Connel Airlines is considering air service from its hub of operations in Cicely, Alaska, to Rome, Wisconsin, and Seattle, Washington. O'Ceonnel has one gate at the Cicely Airport, which operates 12 hours per day. Each flight requires 1 hour of gate time. Each flight to Rome consumes 15 hours of pilot crew time and is expected to produce a profit of $2500.Serving Seattle uses 10 hours of pilot crew time per flight and will result in a profit of $2000 per flight.

Pilot crew labour is limited to 150 hours per day. The market for service to Rome is limited to nine flights per day.

Use the graphic method of linear programming to maximize profits for O'Connel Airlines.

Q. 6 (a) The Flair Furniture company produces inexpensive tables and chairs. The production process for each is similar in that both require a certain number of carpentry work and certain number of labour work in the painting and varnishing department. Each table takes four hours of carpentry and two hours in the painting and varnishing department. Each chair requires three hours of carpentry and one hour in painting and varnishing department. Using the current production period, 240 hours of carpentry and 100 hours of painting and varnishing is available. Each table is sold yields a profit of $7; each chair produced is sold for a $5 profit. Formulate it as LPP. **Do not solve**

Q. 6 (b) A retail store desires to determine the optimal daily order size for a perishable item. The store buys the perishable item at the rate of Rs.60/kg and sells at the rate of Rs.90/kg. If the order size is more than the demand, the excess quantity can be sold at Rs.75/kg in a secondary market; otherwise the opportunity cost for the store is Rs. 10/kg for the unsatisfied portion of the demand. Based on the past experience, it is found that the demand varies from 50 kg to 200 kg in step of 50 kg. The possible values of the order size are from 100kg to 300kg in step of 100kg. Determine the optimal size, which will maximize the daily profit of the store using maximin criteria and equiprobabble criteria.

Q. 7 (a) The city public health department closes down a certain beach when the concentration of E .coli bacteria present in raw sewage becomes too high. Assume that on a particular day the contamination level index is normally distributed with a mean of 160 and standard deviation of 20 for each liter of water. Determine the probability that for any random liter the contamination level index
    lie between 150 and 170   exceed 140   fall below 162.

Q. 7 (b) Patrons arrive at a small post office at the rate of 30 per hour. Service by one clerk on duty takes on an average of 1 minute per customer.
Calculate the mean customer time; also find mean number of customers.
If the waiting time in the system is more than 20 minutes an additional clerk can be hired. Is it necessary to hire an additional clerk?

Q. 8 (a) A news dealer must decide how many copies of a particular magazine to stock in December. He will not stock less than the lowest possible demand and not more than the highest. Each magazine costs him $0.50 and sells for $1.00. At the end of the month, unsold magazines are thrown away. Four levels of demand are 11,12,13,14 in the proportion of 10%, 20%, 45%, 25% .
Using December profits as news dealers pays off, construct his pay off table.
How many copies should be stocked?
How much should he pay for the perfect information.

Q. 8 (b) A life insurance company gives an aptitude test to new sales personnel in order to predict their success at selling. Like most aptitude tests, this one is imperfect. Some high scorers will be poor performers, lacking the necessary motivation. A few low scorers will turn out to be excellent sales representatives. Sacrificing justice of efficiency, the company has established a score of 80 as the minimum for hiring. This score was obtained after a yaer of testing new hires, who were divided in to two categories.- satisfactory, and unsatisfactory. The results of the tests are summarized as follows

performance	proportion of people who scored	
	below 80	80 or above
satisfactory	0.1	0.4
unsatisfactory	0.3	0.2

Since the people tested represents a typical cross section of applicants, are acceptable for future candidates
What is the probability that the candidate

5/

will be satisfactory?
will be unsatisfactory given that he was hired after scoring 80 or above?
would have been satisfactory given that was hired after scoring below 80?

Q.9 For the linear programming problem
Maximize Z= 6X₁+10X₂+2X₃   Profit function
Subject to constraints

$2X_1+4X_2+3X_3 \leq 40$ resource 1
$X_1+X_2 \leq 10$ resource 2
$2X_2+X_3 \leq 12$ resource 3

X$_i$'s are non negative.
The table below is obtained while maximizing the objective function

C		6	10	2	0	0	0	b
Basis	Cb	X₁	X₂	X₃	S₁	S₂	S₃	
S₁	0	*	*	2	*	-2	-1	8
X₁	6	*	*	-1/2	*	1	-1/2	4
X₂	10	*	*	1/2	*	0	1/2	6
	Zj-Cj	*	*	0	*	6	2	Z=84

i)   Replace stars by appropriate numbers. Write the solution.
ii)   Is the solution optimal? if yes Why? if no why not?
iii)   is the solution unique? Justify.
iv)   What is the status of utilization of three resources?
v)   If the availability of resource 1 is made 50 will it affect the feasibility of the solution?
vi)   Which product is not manufactured? If it has to be manufactured, what change do you suggest in the profit contribution of that product?
vii)   The profit contribution of product 2 is reduced by 2, will it affect the optimality of the current solution.
viii)   A new product is introduced that consumes 2 units of resource 2 and 2 units of resource 3. It is estimated that this new product will fetch profit of 5 units per unit. Is it advisable to go for this new product?

Q6

	Table	Chair	Available
Carpentry	4	3	240
Paint & var	2	1	100
Profit	7	5	

Let x,y be no of tables & chairs

Max $Z = 7x + 5y$

S.T $4x + 3y \leq 240$
     $2x + 4y \leq 100$
     $x, y \geq 0$

Organisational Behaviour   3 - 11 - 12

MFM MMM MHRDM MIM I   SEMESTER I

Total : 3 Hours   Total Marks : 60

Section I : Case Study   20 Marks

Rohan had been promoted as supervisor in a plant manufacturing high end sportswear. Before his elevation to management rank, he had been a loom fixer for five years. His work as loom fixer had consistently been of supervisory calibre.

Except for a little good-natured kidding, Rohan's co-workers had wished him well on his new job. And for first week or two, most of them had been co-operative – even helpful – while Rohan was adjusting to his supervisory role.

Lately, Friday afternoon of Rohan's second week as a supervisor, a disturbing incident took place. Having just made the rounds of his department, Rohan stopped in the men's washroom. There he saw two of his old buddies – Asim and Neeraj washing up. "Say fellows. You shouldn't be cleaning up this soon. It's at least another 15 minutes until quitting time." Said Rohan –"Get back on the floor and I'll forget I saw you in here".

"Come off it, Rohan" said Asim. "You used to slip here early yourself on Fridays. Just because you've got a little rank now, don't think you can act tough with us". To this rohan replied, "Things are different now. Both of you get back on the job or I'll make trouble". Asim and Neeraj said nothing more and they both returned to the shop.

From that time on Rohan began to have trouble as supervisor. Asim and Neeraj gave him the silent treatment. The loom operators seemed to forget how to do the simplest things. Every few minutes there was a machine shutdown. By the end of the month, Rohan's department was showing the poorest record for production.

1. How do you think Rohan should have handled the washroom incident?

2. Group member resources, personality characteristics, formal leadership roles, status congruence, among several other factors – influence group behaviour and satisfaction. In the above case bring out the significance of each of the stated variables on the poorest production record of Rohan's department.

I D

EGO

Section II (Attempt any Four)   40 Marks

1. Define Organisational Behaviour. What are the main objectives of OB? Elaborate with examples.

2. Define personality. Critically examine the Freudian stages of personality development.

3. Define Perception. What is attribution theory? What is its application in OB?

4. Describe how various principles of learning might be used in a training programme.

5. What is Job Satisfaction? What is its relationship with productivity, turnover and accidents?

6. What are values? How do they differ from attitudes? Why are values important to the study of OB?

7. Brief descriptions of following theories. (Any Two)
   (a) Maslow
   (b) Mcgregor
   (c) Mcclelland
   (d) Herzberg

JAMNALAL BAJAJ INSTITUTE OF MANAGEMENT STUDIES
UNIVERSITY OF MUMBAI

SEMESTER I

MMM/MFM/MHRDM/MIM I

M.MARKS 100

DURATION 3 HRS

OGRNIZATION BEHAVIOUR

17TH November 2011

Note Answer **ANY Five** Out of **7** questions. All questions carry equal marks.

Q. 1 Discuss in detail the importance of organizational behavior as part of management studies and application in corporate world.

Q. 2 Explain Maslow's Need Hierarchy theory and importance of motivation in overcoming obstacles

Q. 3 Discuss in detail the concept of leadership, - the difference between Leader and manager and give two examples of industry leader of India who have made huge difference to the business world.

Q. 4 What is personality? Discuss A and B type personality. How would you describe personality of Ratan Tata and Vijay Mallya.

Q.5 Discuss different stages of change management. Give one example of any India Industry that has successfully gone through this process.

Q. 6 What is stress? Discuss the causes and effect on an individual.

Q. 7 What is group dynamics? Discuss in details the process and how it affects the working of an organization?

University of Mumbai

Jamnalal Bajaj Institute of Management Studies

First Year First Semester 2011-2012.   18/11/2011.

MMM/MFM/MHRDM/MIM

Principles of Management

Total Marks - 100

N.B: 1) Attempt any <u>Five</u> Questions   2) All questions carry equal marks

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1. Management is an art of getting work done through people." Explain various functions of Management in light of this statement.

2. What are the key characteristics of charismatic leaders? Discuss each of these key characteristics in detail and illustrate your answer with examples.

3. What are the steps in controlling process and state the essentials of effective control

4. Organizing means "grouping of activities and assigning them to team members". Discuss the steps, involved in organizing. Why organizing is important?

5. Enumerate Fayol's principles of Management. How are they different from Taylor's principles? Comment on them in brief.

6. Write notes on:- (Any 2)
   (a) Barriers of Communication
   (b) Leadership styles using Managerial grid.
   (c) Write a note on the assumptions of Mc Gregor's Theory Y.
   (d) Stress Management

7. Describe the cross-cultural challenges of motivation & the challenges managers face in motivating unique groups of workers

8. What is MBO and list the advantages of MBO

9. Explain the steps in Decision Making process. What are the safeguards to be kept in mind during decision making?

-------------------------------- ALL THE BEST --------------------------------

JAMNALAL BAJAJ INSTITUTE OF MANAGEMENT STUDIES

UNIVERSITY OF MUMBAI

Duration 3 hrs   MFM I SEM I

ORGANISATION BEHAVIOUR – I   MARKS – 100

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Note:

1. Please answer the questions to the point.

2. Answer in point form is accepted as long as it is accurate.

3. Use Graph/Flowchart/Diagram to elaborate your answer.

Answer **ANY 4** questions from Part A and **ANY 1** question from Part B. All questions carry equal marks

Part A – Attempt any 4

1] Explain the terms Personality, Values and Attitude. Discuss the role of Values in Indian Corporates and with relevant examples.

2] Explain the Managerial Grid theory of Leadership propounded by Blake and Mouton. Use practical examples from your worklife to illustrate your answer.

3] Define what is motivation and discuss any 3 theories of motivation.

4] Define Conflict and strategies to resolve them and possible outcomes of the same. Explain the concept of Johari window.

5] Explain the difference between a Manager and a Leader. What are the various dynamics of a group formation. Explain the process of communication.

Part B – Attempt any 1

6] Explain the concepts discussed in the Book – Execution.

7] Explain your understanding on Managing change from the book – "Our Iceberg is Melting"

8] Explain the concepts underlined in the book " Goal"

University of Mumbai

Jamnalal Bajaj Institute of Management Studies

First Year First Semester 2010-2011

MMM- Principles of Management

Total Marks - 100

N.B: 1) Attempt any <u>Five</u> Questions   2) All questions carry equal marks

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1. Is the Manager's Job Universal? Importance of Managerial Roles in Small and Large Businesses

2. Elucidate the importance of planning and state the various levels and types of planning

3. Describe different decision making styles & discuss how biases affect decision making

4. Explain why structure and design are important to an organization & describe the key elements of organizational structure

5. Explain the concept of a learning organization and how it influences organizational design

6. Describe the cross-cultural challenges of motivation & the challenges managers face in motivating unique groups of workers

7. Define leaders and leadership. Explain why managers should be leaders.

8. Describe how managers may have to adjust controls for cross-cultural differences. Give suitable examples

9. Short Notes: (Any 2)
    a. Explain Weber's Ideal Bureaucracy
    b. Mintzberg's Managerial Roles
    c. Fayol's 14 Principles of Management
    d. Types of Departmentalization
    e. Span of Control

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

JAMNALAL BAJAJ INSTITUTE OF MANAGEMENT STUDIES
UNIVERSITY OF MUMBAI
MFM/MHRDM/MIM/MMM - 1st YEAR SEMESTER - I (2007-2008)
SUBJECT : ORGANIZATIONAL BEHAVIOR

Date : 16/11/2007　　　　　　　(3 Hours)　　　　　　　**100 Marks**

Instructions :

　　　1. Answer any **Four** questions.
　　　2. All questions carry **equal** marks.

1.　　Case Study. Study the enclosed case and respond to all the three questions raised at the end of the case. Along with other dimensions examine the motivational and change management aspects.

2.　　In today's context, how does the study of OB help organizations in managing behavioural issues ? Use any one theory, approach or example.

3.　　Explain any one theory of motivation. Give a few specific examples of how you would apply this theory in your own organization and your own work place.

4.　　a) Explain the Path-Goal Theory or Managerial Grid Theory of Leadership.
　　　b) What are the various leadership styles that you currently find in Indian Organizations ? Give examples ?

5.　　What are the various types of conflict in an organization ? How can these be managed ?

6.　　Write Short Notes (Any Two)
　　　a) Impact of Globalization on OB
　　　b) Personality
　　　c) Perceptual Process
　　　d) OB issues in the emerging service sector
　　　e) Johari Window
　　　f) Managing Change.

P.T.O.

Closing Case II

BEN AND JERRY'S THRIVES ON COMPANY SPIRIT

Known for its rich ice cream generously laced with tasty tidbits and for its black-and-white cow logo, Ben & Jerry's Homemade, Inc., began simply enough as an ice cream parlor in a renovated gas station. When it opened in 1978 in Burlington, Vermont, it was a social experiment. Cofounders Ben Cohen and Jerry Greenfield wanted to demonstrate that their business could operate differently from many others. They believed that it could be unconventional, shares its prosperity with employees, interact responsibly with the community and still do well from a business standpoint. In fact, they intended to sell the business as soon as it was established and they had proved their point.

But things didn't turn out quite as they planned. Happily, the ice cream was an instant success. Ben and Jerry considered selling the company, but finally decided instead to keep it and use the profits for social change.

As the company continued to grow, Ben and Jerry worked hard to foster fun, charity, goodwill toward coworkers, and the feeling of a small, close-knit group that had helped make the company successful from the start. The company set up various programs to benefit employees. Such programs included hiring the handicapped; providing for free therapy sessions with drug and alcohol counseling for any worker and taking employees on all company trips to see baseball and hockey games. Ben & Jerry's also had a 5-to-1 salary ratio, whereby the highest salaries paid could not equal more than five times the lowest.

Not surprisingly, dedication to the company ran high among the workers. Such dedication was important because the rapid growth of the company and the somewhat informal ways of operating frequently led to crises that required everyone to pitch in. For example, on one such occasion, a new machine to automatically fill pints did not work and production fell behind. Everyone – including Ben and Jerry – worked the production line to fill orders. Some workers made dinner for the rest of the

staff and pizzas were ordered. As always, the group spirit came through.

This spirit that has characterised the company was nurtured by the heavy involvement of the employees in the firm's business affairs. One means was through monthly staff meetings, which all employees were invited to attend. Employees would break into small groups and provide input on solutions to problems.

Gradually, as the company grew bigger, it became more difficult to obtain input from everyone and the meetings became characterised by one-way communication from Ben and other managers. Recognising the problem, Ben attempted to institute the old format by posing the question : "What are the most pressing problems confronting us ?" The approach generated a huge amount of data that were difficult to assimilate. One manager who spent a night helping Ben categorise the responses said, "It was like having this 8-ton dump truck back up and dump its load over you." The overall message to Ben was that the employees were beginning to feel left out.

Growth began to level off at the $ 150 million range. Consumers were becoming more concerned about eating food high in saturated fat. In reaction, the company developed low-fat and nonfat frozen yogurt products. Heavy competition from Grand Metropolitan's Haagen Dazs brand and cheaper premium ice cream emerged. The company began to experience losses.

Ben was forced to conclude that the company had outgrown his management skills and he began to search for a CEO who could recharge the organisation. The company had to abandon the 5-to-1 salary ratio idea because it was difficult to recruit a new CEO of the necessary caliber given the salary arrangement. After a highly publicized search, Ben & Jerry's hired a new CEO, Robert Holland, Jr., a former McKinsey & Co. consultant. He began by instituting tighter controls. Earnings improved. The company began to expand markets in Europe and launched a very successful fat-free sorbet line to compete with the Haagen Dazs brand. After 19 months on the job, Holland resigned amidst rumors of clashes with the founders over meshing their social agenda with shareholder interests. Publicly, Holland said the company needed a CEO strong in marketing and sales. The company then hired Jerry Odak as CEO. Odak has 25 years of experience in consumer products and retailing businesses.

Each year, Ben & Jerry's conducts a self-critical "social performance" audit that is included in its annual report. Part of the audit is based on input from employees, who now number over 700. The employee section of one recent annual report noted that focus groups conducted among employees revealed "a continuing sense of confusion, frustration and low morale on the part of many staff members."[20]

Questions

1. What group norms are evident at Ben & Jerry's ?

2. What factors have contributed to the development of high cohesiveness among Ben & Jerry's employees ?

3. What could Ben and Jerry do to preserve some of the positive aspects of group dynamics ?

JAMNALAL BAJAJ INSTITUTE OF MANAGEMENT STUDIES
UNIVERSITY OF MUMBAI
MFM/MHRDM/MIM/MMM - 1st YEAR SEMESTER - I (2007-2008)
SUBJECT : PRINCIPLES OF MANAGEMENT

Date : 1711/2007   (3 Hours)   100 Marks

> ➤ **Q1 is compulsory**
> ➤ **Give examples**

Q 1) Answer the questions after reading the following case-study:-

PMTC in the business of metal cutting tools & metal forming tools is engulfed in competition with national as well as international players. PMTC's products are used by capital goods & other engineering industries. The business is cyclical in nature, dependent on capacity utilization levels in user industries.

GYAN Chand, the MD of PMTC had been urged by the distributors in a recent meeting, to introduce high-tech metal cutting tools and new models using the latest technology. They felt that this would help them fight the dumping of cheap second hand machinery and increase the domestic as well as export market share. Gyan Chand realized the implications of the distributors' suggestions. This would increase the R & D budget tremendously. A fully automated production line would put pressure on finances. A greater variety of tools, models etc. would require inventory space. Mechanics need to be trained again, especially in running robots and gadgets.

Reflecting on previous staff meetings, Gyan Chand realized that marketing people always wanted a greater variety of models but never appreciated the huge financial burden such a decision would imply. PMTC, after all , carried through its operations all along with just a few models quite successfully. In such a scenario, Gyan Chand felt that there is no need to go in for new models. Instead, he thought the focus should be on improving existing models and reducing the cost and price. The customer now-a-day is more interested in getting value for money. However, to be on safe side he sought the opinion of a consulting firm, in this regard.

QUESTIONS

a) What kind of opportunities and threats exist in the firm's external environment? How would you go about evaluating the strengths and weakness of the firm? What factors are critical for success of failure? (10 marks)

b) What do you think is the mission of the enterprise?   (5 marks)

c)   'To be successful, an organization must be an open system'. What does this mean and how does it apply in this case?   (5 marks)

Answer any 4 from Q 2 to Q 7:- (All questions carry equal marks)

2) What do you understand by M.B.O. Explain

3) Explain the strategic management process in planning

4) What do you understand by formal and informal organization?

5) Explain any four types of organization structure in detail.

6) To be a successful manager what skills should be possessed by the individual?

7) What are the contributions of Fredrick Taylor to Management? What are the Hawthorne studies all about?

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Jamnalal Bajaj Institute of Management Studies
Subject: Principles of Management
Course: MMM, MHRDM, MIM, MFM   (SEMESTER- I)

Date: 15-11-06

Total marks: 100
Time: 3 hours

Note : Section 1 : Q 8 is Compulsory   (Marks 20)
           Answer any 4 of the rest   (Marks 15 each)
    Section 2 is Compulsory   (Marks 20)

Section 1

Q1 a)   Define the terms "Organization" and "Structure". Explain the various types of Organization structure and differentiate between 'Formal' and 'Informal' organizations.

    b)   What are the teachings of Henry Fayol? How does it impact the working of an enterprise?

Q2 a)   Bring out the importance of the planning function in a modern enterprise. What are the different types of plans used by Corporate Planners?

    b)   What are the steps involved in Planning?

Q3 a)   How true is the statement,"Leadership converts potential into reality"? Explain the different types of leadership with examples.

    b)   Who proposed Theory–X and Theory-Y? Which of these theories do you believe would work in the Indian Scenario?

Q4 a)   Comment on the statement, "If you try to control everything you may end up controlling nothing". In the light of this, discuss the essentials of a good Control System.

    b)   What are the factors affecting employee motivation? Outline a system of motivation that will be effective in Indian conditions.

Q5   Explain the advantages and disadvantages of the various sources of recruitment and which according to you is the best source and why?

Q6   Illustrate with examples how in your organization the Systems Approach to Management is applied for creating excellence and effectiveness?

Q7   Elaborate a simple Performance Management and Review system as used or applicable to your organization?

Q8   Write short notes on any three   (**Marks 20**)
    a)   Span of Management
    b)   The shoveling experiment of F.W. Taylor
    c)   Grapevine
    d)   Managerial Grid
    e)   MBO
    f)   Maslows Hierarchy of needs
    g)   Mintzberg's Managerial Roles

Section 2 (Marks 20)

Analyse the case study and answer the questions given

Howard Schultz, chief global strategist of Starbucks, says that his greatest challenge to attract and manage a worldwide workforce. He believes that Starbucks must provide a motivational system that will cut costs while maintaining high quality. Since going public in 1992, the company's stock has risen by more than 800 percent; its retail sales exceeded $2 billion in 2000; and its profits topped $100 million. Starbucks products can be found in restaurants, hotels, offices, airlines, and in more that 2,600 stores throughout the world.

The Starbucks Support Center is located at Starbucks Coffee Company's headquarters in Seattle. There's energy here-not induced by a caffeine rush — but from associates being involved in a robust blend of sense of mission, and challenge. As one of Fortune magazine's "100 Best Companies to Work for in America," not to mention one of the worlds fastest growing purveyors of indulgence, Starbucks has been giving its employees a daily lift since 1971.

Woven into the company's mission statement is the goal: 'Provide a great work environment and treat each other with respect and dignity." It takes more than company declarations to motivate and inspire people. So how does a young, developing company on an aggressive growth tracks motivate more than 27,000 people and inspire balance and a team spirit?

Starbucks recently agreed to launch a line of Fair Trade — Certified beans. Politically correct coffee is grown on small farm cooperatives rather than large plantation. It sells for $ 1.26/ib, which goes directly to the farmers rather than to middlemen, who often pay growers less than $0.50/ib. The higher price paid directly to the farmers who hand-pluck their beans and carry them down the mountain in 100-ib sacks, means that the farmers can afford to send their children to school.

Second is what Starbucks refers to as "a special blend of employee benefits and a work/life program that focuses on the physical, mental, emotional, and creative aspects of each person. Starbucks developed an innovative work/ life program to foster a committed organizational culture — and a long-term partnership. In fact employees at Starbucks are called partners.

Joan Moffat, the Starbucks manager of partner relations and work/life, is responsible for the company's work/life program. It includes on-site fitness services, referral and educational support for child care and elder care, an info line for convenient information, and the Partner Connection — a program that links employees with shared interests and hobbies. Starbucks has comparatively low health-care costs, low absenteeism, and one of the highest retention rates in the industry. "Our turnover rate is 60 percent, which is excellent as compared to the restaurant and retail industry," says Moffat. Moreover, employees reap the benefits of the company's ongoing success.

Starbucks is committed to providing an atmosphere that breeds respect and values the contributions that people make each day, regardless of who or at what level they are in the company. All partners who work a minimum 20 hours a week receive full medical and dental coverage, vacation days, and stock options as part of the Starbucks Bean Stock program. Eligible partners can choose health coverage from two managed care plans or a catastrophic plan. They also can select between two dental plans and a vision plan, because of the young, healthy workforce. Starbucks has low health-benefit costs. According to Annette King, the HR benefits manager, the company's health-care costs are approximately 20 percent lower than the national average.

—   ..

The company also provides disability and life insurance, a discounted stock purchase plan, and a retirement saving plan with matching contributions. These benefits provide a powerful incentive for partner, particularly part-timers, to stay with the company, thus reducing Starbucks recruiting and training costs. "We have historically had low turnover costs. "We have historically had low turnover, most of which can be attributed to the culture and a sense of community," says Moffat.

Three years ago, the HR department began examining how it could become more attuned to employees. For instance, some employees who started with the company when they were in college are now buying homes and dealing with the realities of child care and elder care. Starbucks responded by providing flexible work schedules as part of its work/life program. "Our environment lends itself to meeting multiple life demands. By virtue of our strong sales and accelerated growth, flex schedules have not hurt productivity in the least," says Moffat. "Flexibility is particularly inherent in our stores because of our extended hours of operation and the diversity of our workforce — from students to parents — who need to work alternative hours."

Recent studies have shown that 60 percent of U.S. workers have child-care or elder- care responsibilities. Starbucks recognized — as many other companies have — that partners less encumbered by personal stress and obligations are more innovative and productive. Starbucks implemented several programs that specifically address the life stages and personal needs of its workforce. To help deal with the fast-paced and demanding environment at Starbucks, it also provides referral services for partners and eligible dependents enrolled in the medical plan. It connects them with information that helps make extraordinary life issues more manageable. Moffat herself recently put the program to use when she needed elder-care advice for her grand-mother. In another case, a partner needed emergency child care for his ill son. Starbuck's Working Solutions program made prompt arrangements for a certified in- home caretaker, no work was missed, and Starbucks covered half of the cost.

Questions:

1. What viewpoint of management is practiced at Starbucks? Explain.

2. What systems concepts are illustrated by Starbucks' employees to fill a customer's order?

3. Do you have any principles that Starbucks can adopt. Explain.

****

Sub: Organizational Behavior　　　　　　　　　**Marks Out of: 100**
Date: 14th November 2006　　　　　　　　　**Time: 3.00 pm to 6.00 pm**

Note: 1) Attempt any 5 (Five) Questions
　　　 2) All question carry equal marks

Q1. WHAT OB? DISCUSS ITS INTER RELATIONSHIPS WITH OTHER FUNCTIONS IN THE ORGANISATION.

Q2. HOW DOES THE PROCESS OF PERCEPTION HELP IN MANAGERIAL EFFECTIVENESS?

Q3. HOW DOES THE MOTIVATIONAL PROCESSES WORK IN AN ORGANISATION? GIVE EXAMPLES WITH THE HELP OF ANY ONE THEORY OF MOTIVATION

Q4. "IT IS ESSENTIAL TO GET ALONG WITH PERSONS UNLIKE YOURSELF AT WORK COMMENT.

Q5. CITE EXAMPLES OF DIFFERENT LEADERSHIP STYLES (ANY 2) AND IT'S RELEVANCE TO INDIAN INDUSTRY.

Q6. DESCRIBE IN DETAIL THE CONFLICT RESOLUTION MODEL AND THE CONFLICT RESOLUTION PROCESS IN INDUSTRY.

Q7. EXPLAIN ANY TWO THEORIES ON PERSONALITY, WHY IS THE STUDY OF PERSONALITY BECOMING CRITICAL IN INDIAN INDUSTRY.

Q8. THE CORPORATE WORLD IS CHANGING AND EVOLVING AT A RAPID PACE. EXPLAIN THE MAIN CHALLENGES FACING O.B. PRACTITIONERS TODAY.

Q9. ELABORATE ON THE WHATS IN IT FOR ME WLLFM PRINCIPLE WITH REGARDS TO EMPLOYEE BEHAVIOUR IN ORGANISATIONS.

Q10. a) EXPLAIN THE CONCEPT OF MOMENTS OF TRUTH WITH REGARD TO INTERNAL CUSTOMERS

　　　 b) EXPLAIN THE CONCEPT OF BRAINSTORMING AS A TOOL TO ENHANCE EMPLOYEE MOTIVATION.EXPLAIN THE STEPS IN THE BRAINSTORMING PROCESS.

Q11. SHORT NOTES: (ANY TWO)
　　　　 a) JOHARI WINDOW
　　　　 b) EMOTIONAL INTELLIGENCE
　　　　 c) MANAGEMENT OF CEHANGE
　　　　 d) VALUES AND ETHICS.

Q12. CASE STUDY.

CLOSING CASE

HE SAID, SHE SAID

Shirley and Abdul both work for a software development company. The manager of the new product division was originally the leader of a project team for which she interviewed and hired Abdul. Shirley another project team member, also interviewed Abdul but strongly opposed hiring him for the project because she thought he was not competent to do the job.

Seven months after Abdul was hired the manager left the project to start her own company and recommended that Abdul and Shirley serve as joint project leaders. Shirley agreed reluctantly – with the stipulation that it be made clear she was not working for Abdul. The general manager consented; Shirley and Abdul were to share the project leadership.

Withing a month Shirley was angry because Abdul was representing himself to others as the leader of the entire project and giving the impression that Shirley was working for him. Now Shirley and Abdul are meeting with you to see if you can help them resolve the conflict between them.

Shirley says/ " Right after the joint leadership arrangement was reached with the general manager, Abdul called a meeting of the project team without even consulting me about the time, or content. He just told me when it was being held and said I should be there. At the meeting, Abdul reviewed everyone's duties, line by line, including mine, treating me as just another team member working for him. He sends out letters and signs himself as project director, which obviously implies to others that I am working for him."

Abdul says: " Shirley is all hung up with feelings of power and titles. Just because I sign myself, as project director doesn't mean that she is working for me. I don't see anything to get excited about. What difference does it make? She is too sensitive about everything. I call a meeting and right away she thinks I'm, trying to run everything. Shirley has other things to do-other project to run- so she doesn't pay too much attention to this one. She mostly lets things slide. But when I take the initiative to set up a meeting, she starts jumping up and down about how I am trying to make her work for me."

Discussion Questions A variety of strategies can be used to help resolve the conflict between Abdul and Shirley. Explore the concepts on conflict management presented in conflict management presented in this chapter. Put yourself in the position of mediator between Abdul and Shirley and consider the following questions:

Questions

1. Abdul and Shirley seem to have several conflicts occurring simultaneously. Identify as many of these individual conflicts as possible.
2. Given all the benefits of retrospection, what could or should have been done to avoid this conflict in the first place?

67

JAMNALAL BAJAJ INSTITUTE OF MANAGEMENT STUDIES
UNIVERSITY OF MUMBAI
MMS – First Year – First Semester (2006-07)
Subject : Statistics for Management

Date : 12th December, 2006   Time : 3 hours   Marks : 100

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N.B.: Section I and Section II should be answered separately

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Section I (50 marks)

Note :
1. Q1 is compulsory
2. Attempt two questions from Q2 – Q4
3. Figures to the right indicate full marks
4. Statistical tables provided may be used.
5. Use of calculators is allowed.

1(a) The sum of deviations of a certain number of observations measured from 4 is 72, and the sum of the deviations of these observations from 7 is –3. Find the number of observations and their mean.   (5 marks)

(b) The co-efficient of rank correlation of marks obtained by 10 students in Statistics and Accountancy was found to be 0.2.   It was later found that the difference in ranks in the two subjects obtained by one of the students was wrongly taken as 9 instead of 7.   Find the correct value of the coefficient.   (5 marks)

(c) The arithmetic mean of runs scored by 3 batsmen – Atul, Bharat & Chetan in the same series of 10 deviations of their runs are 15, 12 and 2 respectively.   The standard of the three is to be selected, who will be selected?   (5 marks)

(d) If the first quartile is 142 and the semi interquartile range is 18.   Find the median.   Given that the distribution is normal.   (5 marks)

2(a) If the probability is ½ that a car stolen in Mumbai is found.   What is the probability that atleast one out of 20 cars stolen in the city on a particular day is recovered.   (5 marks)

(b) The probability that a contractor will get a plumbing contract is 2/3, and the probability that he will not get an electric contract is 5/9.   If the probability of getting atleast one contract is 4/5, what is the probability that he will get both the contracts?   **(10 marks)**

3(a) Shri Prem Kumar has 2 cars which he hires out.   The average demand for a car on each day follows a Poisson distribution with mean 1.5.   Find the number of days on which (i) neither car is hired (ii) Some demand is refused.   (5 marks)

(b) Calculate the coefficient of correlation between sales and profits for a sample of 100 firms & comment.   (10 marks)

Profits	Sales (in lakh Rs.)						
('000 Rs.)	7-8	8-9	9-10	10-11	11-12	12-13	Total
50 – 70	5	3	-	-	-	-	8
70 – 90	3	8	5	4	-	-	20
90 – 110	1	-	7	11	2	2	23
110 – 130	-	4	5	15	6	-	30
130 – 150	-	-	2	7	4	6	19
Total	9	15	19	37	12	8	100

1

4(a) In a normal distribution, 7% of the items are under 35 and 89% are under 63. Find the mean and standard deviation of the distribution. (Given that for a standard normal curve, area between ordinate at 0 and 1.23 is .39 and area between ordinate at 0 and 1.48 is .43) (7 marks)

(b) A car manufacturing company has 2 plants. Plant I manufactures 70% of the cars and Plant II manufactures 30%. At Plant I 80% of the cars are of standard quality and at Plant II 90% are of standard quality. A car is selected at random and found to be of standard quality. What is the chance that it came from Plant II? (8 marks)

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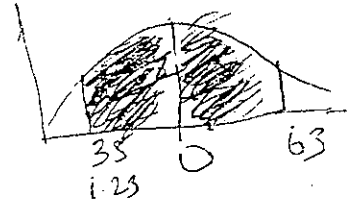
Section II (50 marks)

Note : Question 1 is compulsory and carries 18 marks. Answer any two of the remaining 3 questions. Each of these questions carries 16 marks.

1 a) A manufacturer of automobile batteries claims that his product will last , on average, at least 4 years (48 months). A consumer group wants to evaluate this longevity claim and selects a random sample of 15 such batteries to test. The data below indicate the length of time (in months) that each of the batteries lasted (ie, performed properly before failure).

| 42.3 | 39.6 | 25.0 | 56.2 | 37.2 | 47.4 | 57.5 | 39.3 | 39.2 | 47.0 | 47.4 |
| 39.7 | 57.3 | 51.8 | 31.6 | | | | | | | |

The average life of the batteries was computed as 43.9 months and the standard deviation was computed as 9.44 months.
(i) Is there evidence to suggest that the average battery life is less than 48 months? Test using a significance level of 0.05.
(ii) What assumptions did you have to make in order to perform the test?
(iii) How would you perform the test if the manufacturer gives information, that the standard deviation of the batteries produced is 9 months, and you have no reason to doubt his word? (Do not perform the test)

1 b) The branch manager of a nationalized bank in a small town wants to estimate the average amount held in savings accounts by the depositors. He selects a random sample of 36 depositors and finds their average balance is Rs. 4750. He also computes the standard deviation of the sample as Rs. 1200.
(i) Set up a 95% confidence interval for the true mean balance of all depositors at the branch.
(ii) Explain to him why it is not unusual to find an individual depositor with a balance of Rs. 3700 in his account, even though this lies outside the confidence limits.

2 a) The owner of a large chain of ice cream stores would like to study the effect of the atmospheric temperature on sales during the summer season. A random sample of 10 days is selected and the following data is collected:

Daily Maximum temperature °F	Sales per store 000 Rs.
63	15.2
70	16.8
73	18.0
75	20.5
80	23.6
82	22.5
85	26.8
88	29.0
90	31.4
91	30.6

(i) Estimate the best fitting regression line of the form $Y = a + bX$.

(i) Predict the average sales per store for a day on which the maximum temperature is 83° F.

(ii) Interpret the meaning of the regression coefficient.

(iii) What is the standard error of the estimate?

(iv) Test the significance of the regression coefficient 'b'

(v) What proportion of the variation in the dependent variable is explained by the regression equation?

(vi) The following output was obtained while predicting the sales in Rs. 000 based on the amounts spent on radio and newspaper advertising, both in Rs. 000. From the computer output, what can you say about the significance of the regression as a whole?

(vii) From the output what can you say about the significance of the partial regression coefficients?

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.937308
R Square	0.878547
Adjusted R Square	0.851558
Standard Error	111.5761
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	2	810480.5	405240.3	32.55142	7.58289E-05
Residual	9	112043.1	12449.24		
Total	11	922523.7			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-266.613	166.8379	-1.59804	0.144499	644.0266495	110.8003
Radio Advertising	8.381805	2.222099	3.772021	0.004403	3.355067527	13.40854
Newspaper Advertising	32.28933	4.303787	7.442015	3.93E-05	22.4742978	42.10433

3

3 a) It is desired to estimate the proportion of management trainees who change their first job within the first year. This proportion is to be estimated within 3 percent margin of error and a 95% confidence level is to be used. A past study shows that 30% of management trainees changed their jobs within one year. How large should the sample be for updating the past study?

3 b) A behavioural scientist is conducting a survey to determine if the financial benefits in terms of salary influences the level of satisfaction of employees, or whether there are other factors such as work environment which are more important than salary in influencing employee satisfaction. A random sample of 300 employees are given a test to determine their level of satisfaction. Their salary levels are also recorded. The information is tabulated below:

Level of Satisfaction	Annual Salary (Rs. Lakhs)			
	Under 3	3 – 6	Over 6	Total
High	30	20	15	65
Medium	80	60	25	165
Low	50	15	5	70
Total	160	95	45	300

(i) What test would you use to determine whether the level of employee satisfaction is influenced by salary level?

(ii) At 5% level of significance, carry out the test and state your conclusion.

(Compulsory Question)

1. To examine the effects of the work environment on attitude towards work, an industrial psychologist randomly assigns a group of 18 recently hired trainees to 3 rooms- 6 trainees per room. Each room is identical except for wall colour. One is light green, another is light blue and the third is deep red. During one week, the trainees stay mainly in their rooms. At the end of the week, an attitude scale is used to measure each trainee's attitude towards work (a low score indicates poor attitude, a high score a good attitude). The following data is obtained:

Room colour

Light Green	Light Blue	Deep Red
46	59	34
51	54	29
48	47	43
42	55	40
58	49	45
50	44	34

a) Using a 5% level of significance, is there evidence that the work environment (room colour) has an effect on attitude to work?

b) If so, which room colours influence attitude to work?

* *

UNIVERSITY OF BOMBAY
JAMNALAL BAJAJ INSTITUTE OF MANAGEMENT STUDIES
MHRDM / MMM / MFM -I
Subject: Business Law.

DAY : THURSDAY   Time : 3 Hrs   DATE : 21 Nov 1996   Marks: 100

N.B. :   (i) All questions carry equal marks.

       (ii) Attempt any six questions.

Q1.   What are the consequences of incorporation of a company and explain briefly the procedure for formation of a company ?

Q2.   "An agreement requires meeting of the minds". Comment and discuss when free consent is said to have been vitiated.

Q3.   What is the significance of a Memorandum of Association ? What do you understand by the doctrine of ultra vires ?

Q4.   Write short notes on any three :

    a) Sui Juris

    b) Consideration

    c) Impossibility of Performance

    d) Voidable Contract Indemnity & Guarantee

    e) Remedies for Breach of Contract

Q5.   Explain Annual general meeting. What are the essential requirements of a valid general meeting ?

Q6.   Discuss "the minor's contract is void". Are there any exceptions to the rule ?

Q7.   Define "Promissory Note", "Bill of Exchange" and "Cheque".

Q8.   List restrictive trade practices under MRTP Act and distinguish them from unfair trade practices.

Q9.   What are the different methods of raisins capital by a public limited company ? Distinguish between preference shares and ordinary shares.

Q10.   When the consideration of object of the contract is said to be unlawful ?

Q11.   Write short notes on any THREE :

    a)   Ordinary and special business

    b)   Ordinary and special resolution

    c)   Common Seal

    d)   Holding and subsidiary company

    e)   Prospectus

    f)   Winding up of company

12.   Write short notes on any three of the following :

    a) Crossing a Cheque

    b) Different Methods of Endorsement

    c) Noting and Protesting

    d) Difference between Promissory Note and Bill of Exchange

    e) Holder & Holder in due course

13.   When is a seller of goods deamed to be "unpaid seller" ?

    What are his rights against (i) the goods (ii) the buyer personally ?

N.B: 1) Attempt any Five Questions   2) All questions carry equal marks

1. "Money is the only effective motivator. If you want people to work harder, pay them more and they will perform better. All other forms of so-called motivators are a waste of time, money and effort."

   Do you agree or disagree with the above statement? Support your arguments with the relevant motivation theories. Your answer should also include other possible motivators.
   (20 marks)

2. What are the key characteristics of charismatic leaders? Discuss each of these key characteristics in detail and illustrate your answer with examples.   **(20 marks)**

3. Identify and briefly explain the different kinds of skills needed by managers to perform the task of management in organization. What is the relative mix of these skills at different levels of organizational levels   **(20 marks)**

4. Explain function of staffing. Staffing is the responsibility of every manager and not of the personnel department alone" – discuss   **(20 marks)**

5. "Decision making is at the core of planning." Discuss this statement and spell out the nature of decision making.   **(20 marks)**

6. "Principles of management are flexible and not absolute, but must be utilized in the light of changing and special conditions"- Fayol .Comment and summarize the principles of management as enunciated by Henri Fayol. PADCPSRCHOFSIF Espire de corys.   **(20 marks)**

7. Examine the evolution of management thought from the early pioneers to modern thinkers.   **(20 marks)**

8. Briefly describe the factors determining departmentation. Also mention the bases of departmentation and give examples   **(20 marks)**

------------ All the Best ------------

Date :- 7.11.12

BUSINESS LAW

First Year First Semester of Three-Year Part Time

Masters in Financial Management (MFM)
Masters in Human Resource Management (MHRDM)
Masters in Information Management (MIM)
Masters in Marketing Management (MMM)

| Maximum Marks: 100 | Duration 3 Hours |

Instructions
(a) Answer any six questions.
(b) Figures to the right indicate marks.
(c) Candidates are not permitted to bring any aid to the examination hall, such as, bare acts, text books, reference books, pamphlets, notes, scratch papers, dictionaries, thesauri, or other study materials, or any measuring devices, calculators, laptops, net-books, i-pads, personal data assistants, cell phones, beepers or pagers, photographic devices, stereos or radios.

Q1 Explain the meaning of the concept of 'corporate veil'. Under what circumstances have the courts pierced or lifted the corporate veil. ....(16)

Q2 (a) 'A contract requires meeting of minds'. Comment. ....(8)
(b) Discuss the circumstances under which 'free consent' is said to be vitiated. ......(8)

Q3 Discuss the remedies available to the aggrieved party when a contract is breached. ....(16)

Q4 (a) What do you understand by 'negotiable instruments'? Explain the common features of negotiable instruments. ....(8)
(b) Explain the law regarding dishonour of a cheque. ....(8)

Q5 When is a seller of goods deemed to be an 'unpaid seller'? Enumerate the rights of an unpaid seller. ....(16)

Q6 Discuss the law regarding competence of parties to enter into a valid contract. ....(16)

Q7 (a) Explain the distinguishing features of a private limited company ....(8)
(b) Enumerate and explain the compulsory clauses in the memorandum of association. ....(8)

Q8 Differentiate between the following:
(a) Conditions and warranties ....(4)
(b) Cheques and bill of exchanges ....(4)
(c) Sale and agreement to sell ....(4)
(d) Offers and invitations to treat ....(4)

Q9 Write short notes on any four of the following:
(a) Exceptions to the consideration rule ....(5)
(b) Doctrine of indoor management ....(5)
(c) Concept and types of goods under the Sale of Goods Act, 1932. ....(5)
(d) Meaning and types of crossing of cheques. ....(5)
(e) Articles of association ....(5)
(f) Liquidated damages. ....(5)

University of Mumbai
Jamnalal Bajaj Institute of Management Studies
164, Dadabhoy Naoroji House, H. T. Parekh Marg,
Backbay Reclamation, Mumbai 400 020.

First Year First Semester

of

Three-Year Part Time
Masters in Financial Management (MFM)
Masters in Human Resource Management (MHRDM)
Masters in Information Management (MIM)
Masters in Marketing Management (MMM)

Business Laws

Maximum Marks: 100   Duration 3 Hours
14|11|2007   Note: Answer any five questions

Q1   (a)   Explain the following contracts in one or two sentences:
             (i)   Voidable Contract .... (2)
             (ii)   Void Contract .... (2)
             (iii)   Executory Contract .... (2)
             (iv)   Implied Contract .... (2)
             (v)   Tacit Contract .... (2)
       (b)   Describe the various agreements that are valid and
              enforceable despite the fact that they lack consideration. .... (10)

Q2   (a)   Explain the different ways in which contracts may be
              discharged .... (10)
       (b)   Explain the are the various remedies for breach of contracts .... (10)

Q3   (a)   What are the essential elements of a contract for sale of
              goods? .... (10)
       (b)   Explain the term 'conditions'? What conditions are implied
              in a contract for sale of goods? .... (10)

Q4   (a)   Explain the rules for transfer of property in goods under the
              Sale of Goods Act, 1932. .... (10)
       (b)   What are the rights enjoyed by sellers and buyers under a
              contract for sale of goods? .... (10)

5. (a) Explain the term 'corporate veil'. Under what circumstances does the court pierce this corporate veil?...................................... (10)

   (b) Explain the defining features of the following types of companies in one or two sentences:

   (i) Private limited company .... (2)

   (ii) Company limited by guarantee............................... (2)

   (iii) Government company .... (2)

   (iv) Foreign company... (2)

   (v) Holding company... (2)

Q6 (a) Explain the importance of the objects clause in the memorandum of association of a company. How can a company amend the objects clause?.. (10)

   (b) Explain, giving examples, the doctrine of indoor management... (10)

Q7 (a) Describe the characteristic features of promissory notes................ (10)

   (b) What is the penalty for dishonour of cheques? What conditions must be present for the imposition of penalty?........... (10)

Q8 (a) Describe, giving examples, the various anti-competitive practices carried on by some businesses. .... (14)

   (b) Explain the following terms in one or two sentences:

   (i) Price fixing... (2)

   (ii) Retail price maintenance .... (2)

   (iii) Tie-in sales .... (2)

Q9 Write short notes on any four of the following:

   (a) Offers v. Invitation to treat .... (5)

   (b) Caveat Emptor .... (5)

   (c) Doctrine of constructive notice... (5)

   (d) Articles of association .... (5)

   (e) Endorsement of negotiable instruments .... (5)

   (f) Objectives of competition law .... (5)

University of Mumbai

Jamnalal Bajaj Institute of Management Studies

164, D. N. House, H. T. Parekh Marg, Backbay Reclamation, Mumbai 400 020.

Masters in Financial Management (MFM)

Masters in Human Resource Development Management (MHRDMM)

Masters in Information Management (MIM)

Masters in Marketing Management (MMM)

Year I Semester I Semester-End Examinations

Business Laws

Maximum Marks: 100   Duration: 3 Hours

Instructions:

- Answer any five out of the seven questions
- Figures to the right indicate marks
- Candidates are not permitted to bring any aid to the examination hall, such as, bare acts, text books, reference books, pamphlets, notes, scratch papers, dictionaries, thesauri, or other study materials, or any measuring devices, calculators, personal data assistants (PDAs), cell phones, beepers or pagers, photographic devices, stereos or radios.

Q1 (a) Discuss the essentials of a valid acceptance? What is the postal rule of acceptance? ....(10)

(b) Discuss the contracts that are expressly declared as void under the Indian Contract Act, 1872. ....(10)

Q2 (a) What are the circumstances under which a minor's agreement is considered enforceable? ....(10)

(b) Discuss the various ways in which a contract is discharged ....(10)

Q3 (a) What is the caveat emptor rule? Why do some people think that this rule has become outdated? Give your views on the relevance of the caveat emptor rule in today's age ....(10)

(b) In what ways is a contract of sale of goods different from a contract for providing services? ....(10)

Q4 (a) Describe the relation between the memorandum of association and articles of association of a company. ....(10)

(b) Explain the meaning of preincorporation contracts and discuss the enforceability of such contracts ....(10)

Q5 (a) Briefly state the *defining* features of the following types of companies:

(i) Private Limited Company..(2)
(ii) Government Company...(2)
(iii) Company Limited by Guarantee ....(2)
(iv) Holding Company ....(2)
(v) Foreign Company..(2)

(b) Explain, giving examples, the doctrine of indoor management..(10)

Q6 (a) What are the presumptions as to a negotiable instrument? ....(10)

(b) Explain the meaning of the term 'cheque'. What procedure should be carried out by the payee to ensure that the drawer of a dishonoured cheque is penalized under the Negotiable Instruments Act, 1881? ....(10)

Q7 Write short notes on any three of the following:

(a) Privity of contract...(5)
(b) Undue influence ....(5)
(c) Conditions Vs Warranties ....(5)
(d) Corporate Veil..(5)
(e) Benefits of incorporation ....(5)
(f) Holder in due course ....(5)

University of Mumbai

Jamnalal Bajaj Institute of Management Studies

164, D. n. House, H. T. Parekh Marg, Backbay Reclamation, Mumbai 400 020.

Masters in Financial Management (MFM)

Masters in Human Resource Development Management (MHRDMM)

Masters in Information Management (MIM)

Masters in Marketing Management (MMM)

Year I Semester I

November 2009 Examinations

Business Laws

$21-11-09$

Maximum Marks: 100   Duration: 3 Hours

Instructions:

- Answer any five questions
- Figures to the right indicate marks
- Candidates are not permitted to bring any testing aid to the examination hall, such as: notes, scratch papers, calculators, personal data assistants (PDAs), cell phones, beepers or pagers, photographic devices, stereos or radios, books, pamphlets, or other study materials, dictionaries, thesauri, or any measuring devices.
- Access to telephones, cellular (mobile) phones, pagers or other communication devices will not be permitted at any time while you are in the examination hall

Q1   (a)   Discuss the law regarding competency of parties to enter into a valid contract. ....(10)

(b)   Explain when the consent is said to be induced by "fraud" and "misrepresentation". ....(10)

Q2   (a)   An agreement without consideration is void. Discuss..............................(10)

(b)   Explain, giving examples, the concept of 'invitation to treat'. How is this concept different from an offer or proposal?...................................(10)

Q3   (a)   Is 'merchantable quality' a condition or a warranty? Distinguish between 'Conditions' and 'warranties'...(10)

Case Study

A 40 year old Korean native, who moved to New York with his mother in 1976, is the founder and CEO of Agency.com, one of the largest interactive online ad agencies around these days.

Although interactive advertising comprises only about 1 percent of th200 billion$ advertising market, its potential is enormous. In 1998 alone, the four year old Agency.com quadrupled in size as sales zoomed from S18 million to $80 million. Its client list, including 3M.dDirectV, Guccci, Land Rover, Saab, the Olive Garden and Visa would be the envy of any of the traditional Big Six advertising agencies. Unlike these firms, however Agency.com is not populated by slick executives in tailored suits luxuriating in the wood-paneled suites of New York City high rises. Instead, Agency.com's casually attired, body-pierced twenty-somethings work in a poorly ventilated room over the loading dock in Manhattan's Time – Life building.

Suh considers himself fortunate to have not only the 600 talented people who make up the company but also the space itself his major first business asset. Although bankers just laughed at his business plan in 1995, Suh was determined to launch his agency. So, cashing in on the goodwill he developed with his former employer, Time-Life(for whom he earlier developed Vibe online before venturing out on his own), Suh struck a deal in which he got the space in exchange for completing several projects. One of these was the highly regarded Web site for the 1995 Sports Illustrated swimsuit.edition video. On the strength of his successful experiences with Time, Suh was able attract more blue-chip clients, for whom he struck gold. The Website Agency.com developed for Metlife, for example, grew in popularity from 300000 hits in 1996 to over 4 million hits in 1997. This Web site was only one of over two dozen for which the company won awards for various clients in 1998 (including a prestigious Clio for Pacific Bell). In 2001 alone, Agency.com won 15 prestigious awards for its various Web designs.

For Agency.cm to continue to grow – or even to survive the inevitable the shakeout that's forthcoming in the interactive advertising business – Suh realizes that his company will have to double in the coming months. And with offices now extending beyond Ney York – including Boston Chicago, Dallas, San Fransisco, London, Amstredam, Paris and his native home; Deoul, Korea the company's reach has broadened dramatically. Importantly, as clients grow more sophisticated, they are moving from being knocked out by the novel, whiz-bang technology to the stage where they now are demanding results – a return on their advertising investments. Suh knows that this will keep him busy hiring the most talented and creative people he can find – individuals who share his vision for taking technology to places where no advertising agency has ever been before.

It's having a vision and chasing it that keeps Chan Suh navigating these uncharted waters. After all, only a true visionary and pioneer would say, "We love the fact that we get to invent the future while we live in it". If Suh's vision even comes close to being as accurate as it has been, there's every indication that he will reach the goal of making Agency.com a $1 billion company. Based on recent figures, he appears to be well on his way.

Q1. What special qualities make Chan Suh so effective as a leader?
Q2. Would you say that Chan Suh is a charismatic leader or a transformational leader?

Business Law

First Year First Semester of Three-Year Part Time

Masters in Financial Management (MFM)
Masters in Human Resource Management (MHRDM)
Masters in Information Management (MIM)
Masters in Marketing Management (MMM)

Maximum Marks: 100	Duration 3 Hours

Instructions

- Answer any five questions.
- Figures to the right indicate marks.
- Candidates are not permitted to bring any aid to the examination hall, such as, bare acts, text books, reference books, pamphlets, notes, scratch papers, dictionaries, thesauri, or other study materials, or any measuring devices, calculators, laptops, net-books, i-pads, personal data assistants, cell phones, beepers or pagers, photographic devices, stereos or radios.

Q1   Discuss the law relating to the capacity of a person to enter into a valid contract. .... (20)

Q2   What do you understand by 'free consent' in the context of contract law? When is consent regarded as not free in the case of (a) undue influence; and (b) coercion? .... (20)

Q3   Discuss the essential elements of a contract for sale of goods. .... (20)

Q4   Discuss the rules for transfer of property in goods to the buyer. .... (20)

Q5   Distinguish between:

     (a)   Private limited company and public limited company .... (10)

     (b)   Offer (Proposal) and Invitation to treat .... (10)

Q6   Explain the features of a company that distinguishes it from a partnership firm. .... (20)

Q7   Discuss the various remedies for breach of contracts. .... (20)

Q8   Write short notes on *any four* of the following:

     (a)   Breach of contracts .... (5)

     (b)   Holding and subsidiary companies .... (5)

     (c)   Misrepresentation .... (5)

     (d)   Concept of 'Goods' in the law of sale of goods .... (5)

     (e)   Piercing the corporate veil .... (5)

     (f)   Rights of an unpaid seller .... (5)

IY4 Given below are SPC charts for 2 cases. The parameters for the process are also given below. Comment on the state of process. State at what point will you be alarmed (if at all) and what is the course of action you will take.

10 Marks

Case 1 : Mean X Chart

| Mean | 62 | Sample Size | 6 |
| SD | 0.9 | Sampling Frequency | 1 Hr |
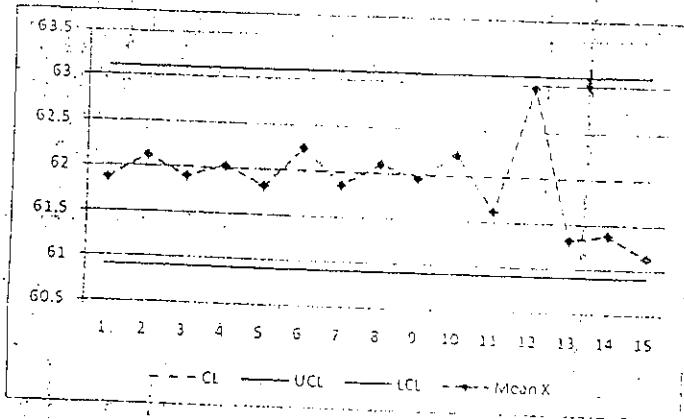
Case 2 : R Chart

| Mean | 100 | Sample Size | 4 |
| SD | 0.6 | Sampling Frequency | 30 Min |

Q5.
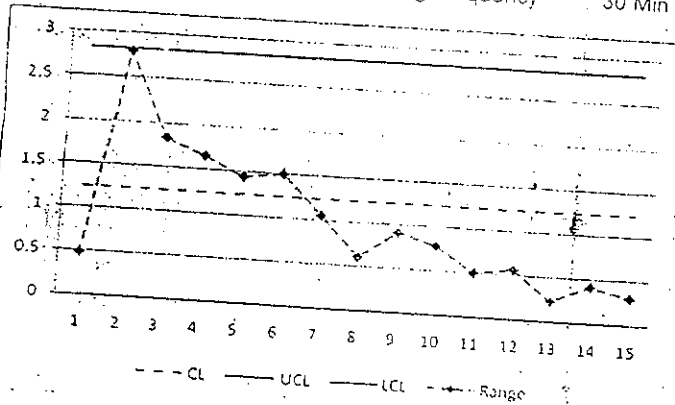
10 Marks

"I believe in my people and processes, we are moving slow but I am sure we will reach the goal" said vikram makhija, the MD of sohail auto components Ltd, a big organization exporting major parts to Honda, GM, Ford and also supplying to local car manufacturing units. It got severely hit due to a quality problem 2 years back within their factory due to which the car manufacturers almost blacklisted it. But due to good relations shared by Mr Makhija with car manuafacturers and also the great history behind, he got one more chance to show improvements.

The quality problem was genuine and was more to do with human resource than machinery. People had lost faith in the system and hence negligence used happen at all the stages.

TQM was implemented and results were to be seen. But his young son Nikhil. graduated from Harward, had BPR in mind for fast results.

"We cant be so patient in this fast changing world, your improvement process is damn slow" Nikhil used to complain. However, his father was very clear about TQM.

The car manufacturers were ready to wait for another 1 year for Sohail Auto to improve as they knew that this was a good company at core. But they were happy with the new conmponent manufacturers eventhough they were slightly higher in cost than Sohail.

Whom do you support : Father or the Son?

Q6.

10 Marks

1) What are different manufacturing systems? Explain with practical examples

2) What is materials management ? Explain ABC analysis with examples

COMPANY LAW QUESTIONNAIRE

Q1. How does a private Limited company have the unique position in the scheme of Companies Act, 1956?

Q2. What are the exemptions and privileges of private company under Companies Act?

Q3. What are the provisions of the Act affects Private Companies?

Q4. What is the meaning of "Subsidiary company" and the "Holding Company"?

Q5. What are the important provisions of the Companies Act in regard to Holding – Subsidiary-relationship?

Q6. What tests are applied to determine Holding-Subsidiary relationship?

Q7. What are the special features on creation of Subsidiary by controlling the composition of Board?

Q8. What are the special features of creation of a subsidiary by virtue of Share-Holding?

Q9. What is meant by wholly owned subsidiary – how is created?

Q10. How does one ascertain the status of an Indian company being a holding company or a subsidiary company or a foreign company?

Q11. What are the restrictions on a subsidiary company holding shares in the Holding company?

Q12. What are the restrictions on a Holding company providing financial assistance for purchase of share of subsidiary company?

Q13. What are the requirements of Companies Act regarding painting or affixing a company's name? (See the guidelines for availability of name of company & for use of Key words).

Q14. What do you mean by a Memorandum of Association?

Q15. What does subscribing to Memorandum of Association mean?

Q16. How are the various clauses of Memorandum of Association framed?

Q17. What is the Ultra Vires doctrine?

Q18. What is the impact of the section 9 on Memorandum of Association?

Q19. What are the condition and non-conditions included in a Memorandum of Association?

Q20. What are the criteria for alteration of Objectives in the Memorandum of Association?

73

LAW OF CONTRACT QUESTIONNAIRE

Q1. What is an agreement?

Q2. What are the rights & obligations an agreement is expected to contain?

Q3. What do you understand by the term "Formation of Contracts"?

Q4. What are the fundamental requirements of a valid contract?

Q5. What are an Offer or Proposal and Acceptance?

Q6. How do you distinguish an offer from invitation/statement of intention/mere communication?

Q7. When an offer lapses?

Q8. What do you understand by revocation of offer by offeror?

Q9. What are the rules governing acceptance?

Q10. What is a standing offer?

Q11. What is meant by contract by post/telephone?

Q12. Define "Consideration"? And what are the exceptions under No considerations?

Q13. What are the kinds of consideration? And what are the exceptions under No Considerations?

Q14. When a contract becomes invalid?

Q15. What is a void contract?

Q16. What is a voidable contract?

Q17. What do you understand by Minors contract?

Q18. Can a Lunatic signing an agreement is valid in law and if not why no?

Q19. Can a contract be signed with an alien enemy's countries customers and what is the validity of such contract?

Q20. What can be various flaws in a contract that can affect the contract Agreement?

Q21. What is the effect of a mistake in a contract, mistake of law, Mis-representation?

Q22. What do you understand by Innocent Misrepresentation?

Q23. What are the essentials in an Insurance contract? What principles are involved in Insurance Contracts?

Q21. What is the procedure for alteration of Objects clause on a Memorandum of Association?

Q22. . What is the procedure for alteration of Domicile clause on a Memorandum of Association?

Q23. What is the duty of the company registered under Companies Act 1956, regarding giving the Member copies of Memorandum of Association?

Q24. What special provision of the Companies Act, 1956 should act on Memorandum of Association?

Q25. In what manner should the Article of Association be prepared for submission to the Registrar of Companies?

Q26. How may alterations in Articles be drafted?

Q27. What are the requirements in regard to formation of a private limited company?

Q28. What is the procedure for incorporation of a private limited company?

Q29. What are the features and advantages of Section 25 Company vis-à-vis a Society?

Q30. What are the exemptions available to Section 25 companies in the Companies Act 1956?

75

SALE OF GOODS ACT, 1930 QUESTIONNAIRE

Q1. What do you understand by Sale & Agreement to sell?

Q2. How contract of sale is made?

Q3. What is the subject matter of contract?

Q4. What is ascertainment of price?

Q5. What do you mean by "Agreement to sell at Valuation"?

Q6. Write Short notes on:-

a. Stipulation as to time

b. Conditions & Warranty

c. When condition to be treated as "warranty"

d. Implied undertaking as to "Title"

e. Sale by "description"

f. Implied conditions as to quality or fitness

g. Sale by sample

Q7. What do you understand by "Performance of Contract"?

Q8. What are the rights of the unpaid seller against the goods?

Q9. What do you mean by unpaid sellers lien?

Q10.What do you mean stoppage in transit?

Q11. What is transfer by buyer or seller?

Q12. What do you understand by "suit" for breach of contract?

Q13. Write short notes on:-

a. Exclusion of implied terms and conditions

b. Reasonable time – a question of fact

Q24. Write Short Notes on:
    a. Difference between fraud and misrepresentation.
    b. Coercion.
    c. Willful misrepresentation.
    d. Contracts.
    e. Illegal Agreements
    f. Immoral Agreements
    g. Agreement in restraint of Trade.
    h. Void Abinitio.
    i. Wagering Contracts.
    j. Void Contracts
    k. Wager
    l. Quasi-Contract.

Q25. What do you understand by "Discharge of Contract"?

Q26. What is performance of Contract?

Q27. Who can demand performance of contract?

Q28. What do you understand by discharge by mutual consent?

Q29. What is meant by impossibility or frustration?

Q30. What is a breach of contract?

Q31. What are the remedies for breach of contract?

Q32. What do you understand by Liquidated and Un-Liquidated damages and what are the kinds of damages are there?

Q33. What is contract of indemnity?

Q34. What are the rights of indemnity holder when sued?

Q35. What is a contract of guarantee? What are the distinctions between indemnity and a guarantee?

Q36. What do you meant by Surety and what are the rights of Surety?

Q37. What do you understand by discharge of surety?

Q38. What is bailment and what are the duties of a Bailor?

Q39. What are the bailee's particular lien/general lien?

Q40. What is a contract of Pledge and what are the rights of Pawnee?

Q41. What do you mean by pledge by non-owners?

77

MONOPOLIES & RESTRICTIVE TRADE PRACTICES ACT QUESTIONNAIRE

Q1. What are the powers of the Commission?

Q2. What are the powers of its contempt?

Q3. What do you understand by concentration of economic power?

Q4. How the central government directs the severance of inter-connection?

Q5. What practices are deemed to be pre-judicial to the public interest?

Q6. What do you understand by Registration of agreements?

Q7. Define unfair trade practice with some explanatory examples

NEGOTIABLE INSTRUMENTS ACT QUESTIONNAIRE

Q1. What is Securitization?

Q2. What assets can be securitized?

Q3. What are the types of Securities?

Q4. What are International Securities?

Q5. What are the steps involved such as

    a. Creation of a Basket or Pool of Loans/Bills/Actionable Claims.
    b. Forming a Special Security Vehicle
    c. Splitting into Shares of Securities

Examples of Pool of Assets

Loans & Advances ⟶ Belonging to Originator ⟶ Receive the Loan Amount

                                            Passed to a SPV.

Debtors

(Asset Value (Shares Securities by SPV, SPV ⟶ May be a Bank/Financial Institution
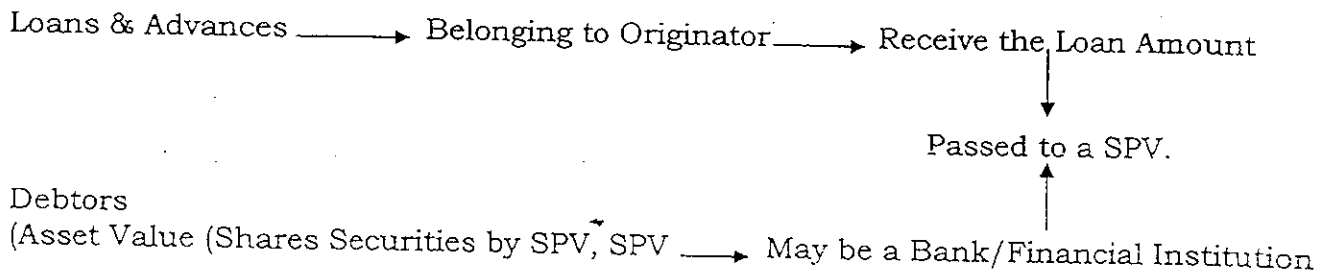
Bills

Other Receivables

Q6. What Assets can be securitized?

    a. Mortgage
    b. Housing Loan
    c. Car Loans
    d. Credit Care Receivables/Trade Receivables/Book Debts/Bills/Actionable Claims

Q7. Types of Securities

    a. Securities confined to national boundaries.
    b. Securities operated internationally.

Q8. Advantages of Securities

    a. Liquidification.
    b. Avenues for Investment.
    c. Mobilizes fund for Investment.
    d. ~~~~~~~~
    e. Easy Transferability.

79

Q9. Legal Issues/Loss Involved

    a. Transfer of Property Act, 1881.
    b. Registration Act, 1988.
    c. Negotiable Instrument Act, 1872
    d. Indian Stamp Act, 1899
    e. Income Tax Act, 1961.
    f. Securities Contract Regulation Act, 1958.
    g. SEBI Act, 1992.

Q10. Role of Government

    a. Removable of All Legal Barriers
    b. Providing appropriate incentives & adequate infrastructural facilities.
    c. Stamp Duty Remissions
    d. Income Tax Incentives
    e. Development of Infrastructure.

Q11. Creation of International Securities.

Indian Side

Shares, Stocks Debenture/Debenture Stock   Release of Indian Investment

Release of Depository

Foreign Country

Repaid to Foreign Investors   To Foreign Investors

Issue of GDR/IDR

Creating a SPV.

A Foreign Deposit (Debenture, Stock).
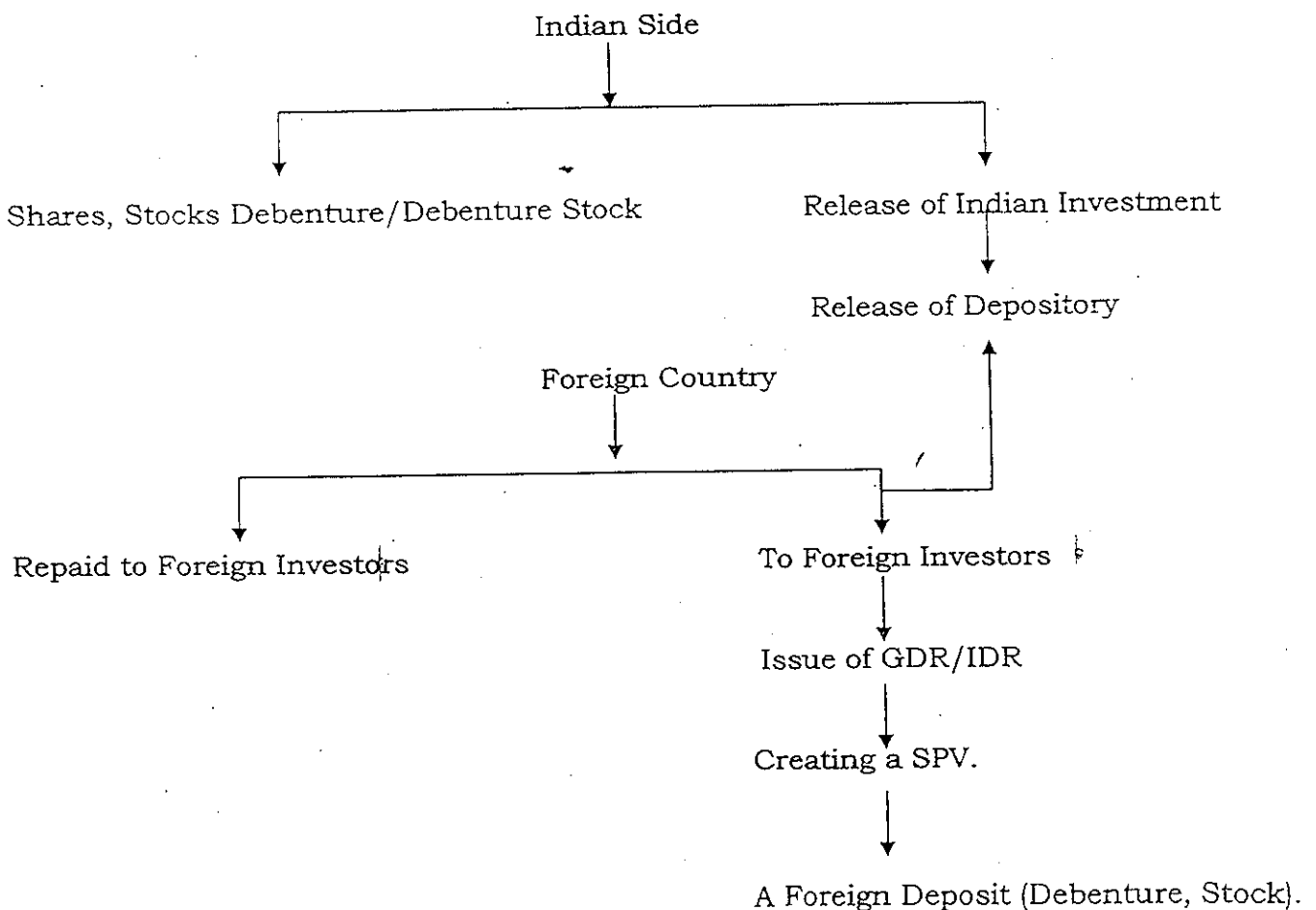
Q12. What is the need for Negotiable Instrument?

Q13. Negotiable Endorsement can be done in two ways

    a. When the Instrument is Payable to Bearer it is Negotiable to Third Party.
    b. When the Instrument is Payable to "ORDER" then negotiation can be done by the first endorsing it & then delivering it by the Holder.

Q14. Promissory Notes (Section 4) must be payable to or the Order of the specified person name in the note?

JAMNALAL BAJAJ INSTITUTE OF MANAGEMENT STUDIES
UNIVERSITY OF MUMBAI
MFM/MMM/MHRDM/MIM I   SEMESTER II
MANAGERAIL ECONIMICS
DURATION 3 HRS   M.MARKS 100
Note: Answer any FOUR
26th April 2011

1. What is demand forecasting? What is the need of demand forecasting?
   Explain the measures like Smoothing techniques and Analysis of time series and trend projections.
2. What is monopoly? What are the causes of monopoly? List down the disadvantages of monopoly. Write down the different measures of monopoly power.
3. What are the general considerations which must be kept in mind while pricing?
   Write down the objectives of a pricing policy of a firm.

4. Write short notes on (any two) :
   i)   Price Forecasting
   ii)   3Cs framework of pricing.
   iii) Different profit theories.
   iv)   Break even point analysis

5. Prove with the help of the theory of 6/10 (60:40) rule that the increase in production leads to an advantage of economies of scale.

6. A manufacturer makes and sells tables. lamps and chairs. The cost accounting department and the sales department have supplied the following data as given below:

PRODUCT	SELLING PRICE per unit Rs.	VARIABLE COST per unit Rs.	Percentage of rupee sales volume Rs.
TABLES	40	30	20
LAMPS	50	40	30
CHAIRS	70	50	50

Capacity of the firm –Rs. 1,50,000 of total sales value.
Annual fixed cost------Rs. 20,000
Now, calculate i) Break even point.
             ii) Profit if the firm operates at 80 percent of capacity.

Part Time Masters Course
Operations Management Examination

SECTION 1 – 1.5 hours

Note: 1. Question 1 is compulsory. Attempt any 3 from Questions 2-6
2. Make valid assumptions wherever necessary. State them clearly.

20 Marks

Q1. Attempt any 4

1. Explain what is process chart in method study and how is it used for process improvement
2. Define & Explain TQM. Who were the contributors to TQM, give details of any one of them with practical examples.
3. Value engineering is focused on "Cost reduction". Give your views and explain them with practical examples.
4. What are the key differences between BPR & Kaizen
5. Explain why P & Q systems of inventory management were used more in 1930-1970 as compared to EOQ.
6. Enumerate some key factors that influence selection of facility location
7. Differentiate between product layout and process layout
8. Explain why 2 charts, viz. Mean X chart and R chart are used in SPC and not only one of these?

10 Marks

Q2.

Explain Johnson's 2 machine rule & solve the following problem.
There are 8 jobs to be processed in the sequence M1-M2. Find the optimal sequence with the make-span. Also find the idle time for M2

Jobs →	1	2	3	4	5	6	7	8
M1	8	9	5	7	3	7	2	10
M2	10	3	8	4	6	9	7	5

10 Marks

Q3.

For a project, the details for each activity are as given below. Find the total project duration and Critical activities.

Activity	A	B	C	D	E	F	G	H	I
Immediate Predecessor	-	A	B	A	C	C	D,E	F	G,H
Duration	6	7	4	12	3	9	4	10	11
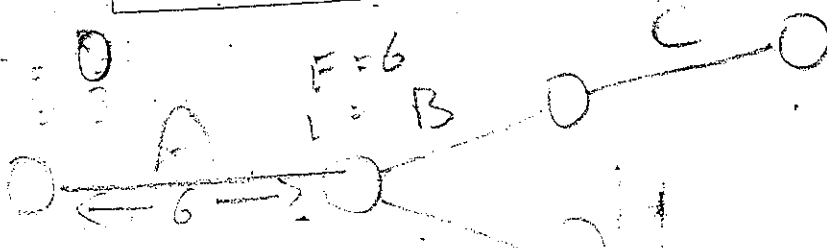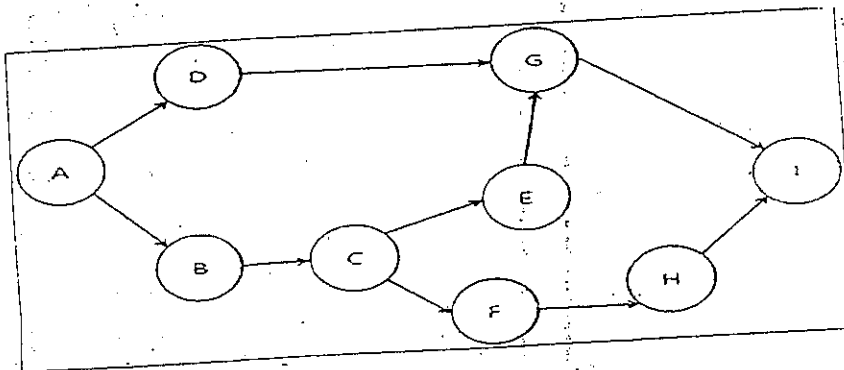
Duration 3 hrs   8th May 2012   Marks: 60

Note : All the questions are **compulsory**; Figures to the right indicate full marks allotted to the question. Draw diagrams wherever necessary.

Q. 1.   Explain the concept of "Ceteris Paribus".   10

OR

Q. 1.   Elaborate how the concept of "Consumer Surplus" is useful to a business manager in his decision making.   10

Q. 2.   With the help of examples, explain the use of the concepts of Price elasticity of demand and income elasticity of demand in business decisions.   15

OR

Q. 2.   Define the term price elasticity of demand. Explain various methods of measuring price elasticity.   15

Q. 3.   Write in brief on Returns to Scale.   5

OR

Q. 3.   What is Break- even Analysis?   5

Q. 4.   What are the essential features of a perfectly competitive market? Illustrate a firm making a short- run loss. Why is this situation unlikely to persist in the long run?   10

OR

Q. 4.   "Besides profit maximization business firms have other goals like Sales Maximization, Growth Maximization, Manager's Utility Maximization, etc." Discuss.   10

Q. 5.   Write a short note on Opportunity Cost.   4

OR

Q. 5.   From the following data find out Average cost and Marginal cost.   4

Units of Output :   0   1   2   3   4

Total Cost: 50   80   120 170 230

Q. 6.   "Cartels are beneficial because they reduce Uncertainty". Discuss.   6

OR

Q. 6.   Write on degrees of Price Discrimination.   6

Q. 7.   What was the solution suggested by John Maynard Keynes to deal with the Great Depression of 1929-30?   10

Q. 7.   OR

What is the prescription of J.M Keynes for smoothening business cycle?   10

Duration 3 hrs   8th May 2012   Marks: 100

Note: (1) Attempt ANY FIVE Questions.   (2) All Questions carry equal marks.

Q.1 (a) Explain the concept of "Ceteris Paribus".

(b) Distinguish between "Movement along the Demand Curve" and "Shift of the Demand Curve". What are the factors which can Cause a "Shift in the Demand Curve"?

(c) With the help of examples, explain the use of the concepts of <u>Price elasticity of demand</u> and <u>income elasticity of demand</u> in Business decisions.

Q.2 Explain the effect on market price and quantity in the market for Mobile phone handsets of each of the following:
a) Consumer incomes rise.
b) Technical improvements reduce production costs.
c) The price of fixed-line calls falls sharply.

Q.3 a) Suggest products that you think might have the following patterns of elasticity of demand:
- high income elasticity, high price elasticity;
- high income elasticity, low price elasticity;
- low income elasticity, low price elasticity;
- low income elasticity, high price elasticity.

b) Define the elasticity of demand and explain why this concept should be of interest to anyone in business who has a choice to make about the price at which to sell their products.

Q.4 What are the three rules of profit maximization? Explain these rules in the context of a firm that is in a perfectly competitive market structure.

Q.5 a) Why must marginal revenue be less than price for any firm that faces a downward-sloping demand curve for its product?

b)   In what sense does monopoly lead to a misallocation of resources?

c)   Why are most cartels doomed to failure in the long run if they use their cartel power?

Q.6 a) What is a Nash equilibrium and why is it self-policing?

b) Why do you think that non-price competition is an important Factor where there is a small group of interacting competitors?

Q.7 a) Name two macro economic variables that decline when the economy goes into a recession. Name one macro economic variable that rises during a recession.

b) Draw a diagram with aggregate demand, short-run aggregate supply, and long-run aggregate supply. Be careful to label the axes correctly.

c) Explain why the long-run aggregate-supply curve is vertical.

Q.8 a) Draw the short-run tradeoff between inflation and unemployment. How might the RBI move the economy from one point on this curve to another?

b) Draw the long-run tradeoff between inflation and unemployment. Explain how the short-run and long-run tradeoffs are related.

Q.9 a) What was the solution suggested by <u>John Maynard Keynes</u> to deal with the Great Depression of 1929?

b)   What are the ideas of Keynes which can be utilized to tackle the current Global Recession?

c)   In what region of the Short Run Aggregate supply curve will Keynes' Prescription work?

Q.10 Why might Government Intervention in the form of price ceilings and floors, have undesirable consequences? Explain with atleast one example.

OR

Does the "Paradox of thrift" mean that saving is bad for the Economy? Elaborate.

JAMNALAL BAJAJ INSTITUTE OF MANAGEMENT STUDIES

UNIVERSITY OF MUMBAI

MHRDM/MMM/MFM/MIM

FIRST YEAR SECOND SEMESTER EXAMINATION – 2009

MANAGERIAL ECONOMICS

Date: 12th May 2009
Time: 2.30 pm to 5.30 pm   Marks : 100

Note: (1) Attempt any FIVE Questions.

(2) All Questions carry equal marks.

Q.1

(a) Explain the concept of "Ceteris Paribus".

(b) Distinguish between "Movement along the Demand Curve" and "Shift of the Demand Curve". What are the factors which can cause a "Shift in the Demand Curve"?

(c) With the help of examples, explain the use of the concepts of Price elasticity of demand and income elasticity of demand in business decisions.

OR

(a) Explain the Hicksian approach to consumer equilibrium with indifference curve technique.

(b) Elaborate how the concept of "Consumer Surplus" is useful to a business manager in his decision making.

11

Q.2

(a) From the following data find out Total Fixed cost, Total variable cost, Average cost and Marginal cost.

Units of Output	0	1	2	3	4
Total Cost	50	80	120	170	230

(b) Explain the relationship between Total cost, Average cost and Marginal cost.

(c) Explain why increasing the level of output produced in the short run is likely to require a higher product price than if the same increase in output takes place in the long run.

Q.3

What are the essential features of a perfectly competitive market? Illustrate a firm making a short-run loss. Why is this situation unlikely to persist in the long run?

OR

"Perfectly competitive market in the short run allows even the less efficient to survive for some time" Discuss.

Q.4

(a) Why must marginal revenue be less than price for any firm that faces a downward –sloping demand curve for its product?

(b) In what sense does monopoly lead to a misallocation of resources?

(c) Why are most cartels doomed to failure in the long run if they use their cartel power?

OR

(a) "The discriminating monopolist allocates his output and price in a manner such that he can maximize his profit". Discuss with examples.

(b) "The market that exists mostly are monopolistic competitive market" – Elucidate with reference to auto industry.

Q.5

(a) Explain the nature and managerial uses of the Production Function.

(b) As a managerial economist, what are the factors which you will take into account while introducing a new product in the product line of your firm? Discuss the problems involved in product-line pricing.

Q.6

(a) To what extent is it true that pursuit of one macroeconomic policy objective involves a trade-off in terms of the worsening of a different macroeconomic target?

(b) Draw the short-run trade-off between inflation and unemployment. How might the RBI move the economy from one point on this curve to another?

13

Q.7

(a) How might the Government use fiscal policy to influence the economy? How might the RBI Governor use monetary policy to influence the economy? Should RBI function with total autonomy?

(b) List the various fiscal and monetary measures taken by the Government of India/RBI during the last 6-8 months to tackle the impact of the Global Recession in India.

Q.8

(a) What was the solution suggested by <u>John Maynard Keynes</u> to deal with the Great Depression of 1929?

(b) What are the ideas of Keynes which can be utilised to tackle the Global Recession of 2008-09?

(c) In what region of the Short Run Aggregate supply curve will Keynes' Prescription work?

Q.9

Write Short Notes on any <u>Four</u> of the following.

(a) Opportunity Cost.

(b) Adam Smith's Invisible Hand Doctrine

(c) The Prisoners' Dilemma Game

(d) Circular-Flow model

(e) Business Cycle

(f) Capital Budgeting

JAMNALAL BAJAJ INSTITUTE OF MANAGEMENT STUDIES
UNIVERSITY OF MUMBAI
MFM/MMM/MHRDM/MIM
First Year (Second Semester) Examination
Subject: Managerial Economics (Marks: 100)

Date: 29/04/2008   Time: 3 to 6 p.m.

Note: Attempt any five questions
      All questions carry equal Marks

Q1. (a)Explain what is meant by the term profit maximization in economic theory and how it can be achieved. Explain why Profit gets maximized at the point where MR=MC? (10)

(b) Write brief note on alternative objectives of forms, besides the objective of profit maximization. (10)

Q2. (a) Krishna dairy is selling flavored milk and buttermilk. The dairy sells 2000 packets of flavored milk and 1000 packets of buttermilk daily. The former is priced at Rs. 6 and latter at Rs. 4. A market survey estimates that price elasticity of flavored milk is - 1.3 and cross elasticity between the two products is +1.8. The dairy is contemplating increasing the prices of flavored milk by 20%. Work out the impact of the move on the demand of the two products. (8)

(b) Define the term price elasticity of demand. Write brief note on various methods of measuring price elasticity. Also explain how the concept of price elasticity is different from the concept of income elasticity. (12)

Q3. (a) Explain the law of returns to variable input and state its assumptions (Short run production law). What is the practical explanation for the application of the law? Quote example of any industry or sector where the application of the law is evident. (10)

(b) Explain why it is said that short run average cost curve has "U" shape while the long run cost curve is flatter? (10)

Q4. (a) Markwell Ltd manufactures filing cabinet. For the current year the company is expecting to sell 4000 cabinets. Company is making profit of Rs.100, 000. The fixed cost for the company is 10, 00,000 and the variable cost is 60% of the sales value. You are required to compute the following:
1. Break Even Point for the company.
2. Sales required for generating profit of Rs. 20, 00,000.(10)

(b) Sales manager of a company is trying to forecast demand for the year 2008. Sales figures for the past few years are as follows:

Year	2003	2004	2005	2006	2007
Sales	540	380	740	960	800

By using five year moving method and regression analysis (Both) predict demand for the year 2008 and 2009. Which of the two methods is better and why? (10)

Q5. (a) Explain how price can determined under perfect competition. (10)

(b) Write brief note on degrees of Price discrimination. (10)

Q6. Explain the relevant economic models of oligopoly, which explain the following two oligopoly market conditions:
1. Emergence of price war and war for market share.
2. Price being sticky for some products in oligopoly market. (20)

Q7. Write detailed note on pricing policies that can be adopted by various firms under varied market situations. (20)

Q8. (a) Explain with help of any contemporary economic model the reasons for emergence of business cycle. (10)
    (b) Explain, why the national income and employment level in any economy is dependent on the aggregate demand and aggregate supply of the economy. (10)

Q9. Write short notes on any two of the following:
1. Law of returns to scale.
2. Importance of capital budgeting.
3. Survey techniques of demand forecasting.
4. Price determination under monopoly.
5. Cross elasticity of demand

Q10. (a) Solve the following:
For an economy the input output model carries the following values:

From/To	A	I	FC
A	200	600	200
I	400	800	800

Where A = Agriculture
      B = Industry
      FC = Final consumption
Work out the appropriate values for the total output to be generated by the agriculture and industrial sector if the value of Final Consumption for the agricultural sector in future is expected to be 400 and for the industrial sector the same is expected to be 1000.
    (b) A company is considering following investment projects;

Cash Flows				
Projects	Cash Outflow	Cash Inflow (End of Year1)	Cash Inflow (End of Year2)	Cash Inflow (End of Year3)
A	10,000	5,000	8,000	
B	10,000	7,500	7,500	
C	10,000	2,000	4,000	12,000
D	10,000	8,000	3,000	2,000

Rank the projects on basis of following methods;
1. Payback Period Method
2. NPV Method (Discount rate being 10% and present value of Rupee one being: 0.909, 0.826, and 0.7521 at the end of year one two and three.

Jamnalal Bajaj Institute for Management Studies
University of Mumbai
MFM/ MMM/ MHRDM/ MIM – First year, Second Semester
Subject – Managerial Economics

Time: 3.00 to 6.00   Date: 28/04/2007   Max. Marks: 100

Note: Attempt any five questions
All questions carry equal marks
Draw appropriate diagrams, wherever required

Q1. (a) Define Price elasticity of demand and Income elasticity of demand. (10)

(b) Analyse what happens to sales and revenue of suppliers when government imposes sales tax/ excise on cigarettes when:

1. Demand for cigarettes is elastic.
2. Demand is inelastic (10)

If the government's goal were merely to raise tax revenue, would it be better to tax goods with elastic demand or with inelastic demand curves?

Q2. (a) Why, the Government intervention in form of price ceiling and floor, for certain products may have undesirable consequences? (10)

(b) "Rent control in the city of Mumbai, has led to scarcity in housing stock". Discuss. (10)

Q3. (a) Which of the following industries would you say is close to being perfectly competitive market and why: Brewing and wine making, Taxi driving, Airlines, Copper Mining, Potato Farming, Car Manufacturing. (10)

(b) Firms maximise profit where Marginal cost equals Marginal Revenue (MC = MR). By using diagram or by using mathematical theory, explain why this is the case. (10)

Q4. (a) Compare and contrast Perfect competition, Monopoly and Imperfect competition. (10)

(b) What are the various methods of dealing with Monopoly? (10)

Q5. (a) Explain how the concept of Opportunity cost measures the real cost of resource allocation decisions. (8)

(b) Explain following cost concepts: Fixed cost, Average Fixed cost, Variable cost, Average Variable cost and Marginal cost. Explain how their diagrams will vary if the cost function is assumed to be liner or if it is assumed to be cubic. Which assumption may be more practical? (12)

Q6. Explain relevant economic models of oligopoly, which explain the following two oligopoly market conditions:
1. Emergence of price war and war for market share
2. Price being sticky for some products in oligopoly market. (20)

Q7. Explain different methods of pricing used in business. Do you think that pricing is done only for profit? Discuss. (20)

Q8. (a) Describe what is "Business cycle". What are the economic explanations of the causes of business cycles? (10)
(b) What is the prescription of J.M. Keynes for smoothening business cycles? (10)

Q9. Write short notes on any four: (20)
1. Differentiate between Economic profit and Business Profit.
2. Price Discrimination.
3. Monopolistic Competition.
4. Game theory and its application in oligopoly market.
5. Quantitative tools used for Demand Forecasting.
6. Break Even Analysis and its link to economic cost concepts.

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45

Sub: Financial Accounting
Date: 9ᵗʰ November, 2006

Marks Out of : 100
Time : 3.00 pm to 6.00 pm

Note: 1) Attempt Question No.1. which is compulsory and
2) Any 4 (Four) from the rest.
3) All question carry equal marks.

Q.1) Mr. Gupta runs a general store. His Trial Balance as on 31ˢᵗ March 2004 was as follows :

Particulars	Dr. Rs.	Cr. Rs.
Capital		12,50,000
Drawings	1,25,000	
Purchasers	19,62,000	
Sales		25,90,000
Opening Stock	2,20,000	
Returns Outward		22,000
Freight Inward	55,000	
Discount Received		25,000
Salaries	2,95,000	
Commission		57,500
Discount Allowed	25,000	
Discount Received Dividend Received		32,000
Bad Debts	19,500	
Provisions for Doubtful Debts		15,000
Sundry Debtors	2,65,000	
Purchase Subsides		64,500
Returns Inward	26,000	
Investment	2,05,000	
Furniture	2,20,000	
Sundry Creditors		2,00,000
Salesmen's Commission	15,000	
Office Expenses	72,500	
Sales Tax	1,22,000	
Cash on Hand and at Bank	6,29,000	
	42,56,000	42,56,000

Additional Information
(a) Mr. Gupta purchased a running business of Mr. Gour for Rs.5,90,000 on 31ˢᵗ March, 2004, He took over stock of Rs.3,25,000, Debtors Rs. 2,65,000, Furniture Rs.75,000 and Crdeitors Rs.75,000. No entry was passed for this transaction.

(b) Closing stock as on 31ˢᵗ Mach, 2004 was not valued. Mr. Gupta earned a uniform rate of gross profit of 25% on net sales.

(c) Provision for doubtful debts is to be maintained at 7 ½ % on debtors.

(d) Purchases include purchases of furniture on 1ˢᵗ January, 2004 worth Rs.45,000.

(e) Sales include sales of old furniture for Rs.16,000 on 1ˢᵗ October, 2003, (WDV of such furniture on 1ˢᵗ April 2003, was Rs.26,000).

(f) Furniture was to be depreciated by 10% p.a.

You are required to prepare the Profit & Loss Account of Mr. Gupta for the year ended 31ˢᵗ March, 2004 and also a Balance Sheet as on the date.

51

Q.2) From the under mentioned Trial Balance of Mitra & Co. prepare a Profit & Loss Account and a Balance Sheet.

Trial Balance As on 31.03.2004

Particulars	Dr Rs.	Cr. Rs.
Opening Stock	45,000	
Capital A/c		90,000
Plant & Machinery	85,000	
Sundry Creditors		40,000
Fixtures & Fittings	7,500	
Discount Received		3,500
Freehold Premises	75,000	
Bank Overdraft		20,000
Purchases	1,50,000	
Provision for Bad Debts		3,000
Salaries	14,000	
Purchase Returns		1,500
Sundry Debtors	55,000	
Sales (net)		3,37,070
Manufacturing Expenses	15,000	
Manufacturing Wages	30,000	
Carriage Inwards	2,000	
Carriage Outwards	2,100	
Administrative Expenses	10,000	
Bad Debts	750	
Interest and Bank Charges	625	
Discount Allowed	750	
Insurance	1,500	
Cash at Bank	695	
Cash in Hand	150	
	4,95,070	4,95,070

The following adjustments are required:
(a) Closing stock as on 31st March, 2004 was Rs.57,000.
(b) Depreciation on Plant and Machinery @ 10% Fixtures & Fittings @ 5%.
(c) Prepaid insurance Rs.500.
(d) Prepaid salary Rs.600.
(e) Outstanding interest on overdraft Rs.2,500.
(f) Provision for bad debts is to be maintained at 5% of sundry debtors.

Q.3) Distinguish between.

(i) Tangible and Intangible Assets.
(ii) Prepaid expenses and outstanding expenses.
(iii) Fixed Assets and Current Assets.
(iv) Straight Line method and written down value method of providing depreciation.

Q.4) Pass Journal entries for the following transactions.

(i) Brought Cash into the business by way of capital Rs.10000000
(ii) Credit sales to x Rs.500000
(iii) Received from x Rs.500000
(iv) Cash Sales Rs.5000
(v) Borrowed from City Bank Rs.2000000
(vi) Paid interest on borrowed funds Rs.150000
(vii) Repaid the loan to City Bank Rs.2000000
(viii) Paid Salaries Rs.300000
(ix) Dividend Received Rs.8000
(x) Lease rentals paid Rs.1500

Q.5) Prepare ledger accounts for the above transactions given in Question 4.

Q.6) a) Explain Statutory Audit and Internal Audit.
b) Describe GAAP.

Q.7) Write short notes on (any 4).

    (i)   Conservation Concept
    (ii)   FIFO and LIFO
    (iii)   Reserves and Surplus
    (iv)   Balance Sheet
    (v)   Monetary Qualification Concept

Q.8) Explain in detail the Accounting Process.

Tuesday, 10-11-2009   (3 Hours)   (Total Marks 100

N. B. : 1. Attempt any **Five** questions.
    2. All questions carry **equal** marks.

1. Pass Journal entries for the following transactions.

    (1) Brought cash into the business by way of capital Rs.50,00,000
    (2) Credit Sales to X Rs.5,00,000
    (3) Received from X Rs.5,00,000
    (4) Borrowed from city Bank Rs.7,00,000
    (5) Paid interest on borrowed funds Rs.70,000
    (6) Repaid the borrowed funds to City Bank Rs.7,00,000
    (7) Cash Sales Rs.5,000
    (8) Purchased Machinery on credit from Y Rs.1,00,000
    (9) Paid to Y Rs.1,00,000
    (10) Paid wages Rs.75,000

2. Prepare ledger account for the above.

3. From the following information prepare a Balance sheet of Mr X as at 31-03-2007

Plant and Machinery	Rs.100000
Prepaid Expenses	Rs.1000
Income received in advance	Rs.2000
Bills Payable	Rs.3000
Sundry Debtors	Rs.100000
Bank Overdraft	Rs.10000
Loan from Bank	Rs.100000
Capital	Rs.200000
Land	Rs.10000
Drawings	Rs.10000
Cash in Hand	Rs.5000
Furniture & Fixture	Rs.20000
Accured Income	Rs.2000
Outstanding Expenses	Rs.1000
Bills Receivable	Rs.2000
Sundry Creditors	Rs.99000
Investments in shares of X Ltd	Rs.10000
Closing Stock	Rs.85000
Building	Rs.100000
Goodwill	Rs.10000
Net Profit	Rs.50000
Cash at Bank	Rs.10000

P.T.O

University of Mumbai
Jamnalal Bajaj Institute of Management Studies
First Year First Semester 2009-2010
MFM/MMM/MHRDM/MIM
Sub : Principles of Management

Monday, 16-11-2009   (3 Hours)   (Total Marks 100

N. B. : 1. Attempt any Four questions.
   3. All questions carry equal marks

1. Describe the contribution of Henri Fayol to the world of Management

2. Explain and distinguish, with examples, the concept of efficiency and effectiveness, in Management

3. Explain the various factors that Managers have to look or to cope with a rapidly changing external environment

4. Discuss the importance of effective communication in the managerial process of planning, budgeting, leading, directing and controlling.

5. Discuss the importance, to the managerial process of planning, directing, controlling and motivating of "SMART" objectives and Key Result Areas (KRA's)

6. For a Manager to be effective, what proficient skills should he have ?

7. Identify any Four different ways by which Management can departmentalize?

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1, product
2, customer
3,
4, Geography.
   social grap.

4. Distinguish between :
   (a) Tangible Assets and Intangible Assets
   (b) Fixed Assets and Current Assets
   (c) Statutory Audit and Internal Audit

5. Explain the following :
   (i)   Net Block
   (ii)   Net worth
   (iii)   Net current Assets
   (iv)   Share Capital
   (v)   Reserves and Surplus
   (vi)   Secured loans
   (vii)   Unsecured loans
   (viii) Current Liabilities
   (ix)   Depreciation
   (x)   Investments

6. Explain the Accounting Process.

7. (a) What is capital and Revenue expenditure
   (b) State with reasons whether the following are capital or Revenue
       Expenditure :
       (i)   Expenses on foreign tour for purchasing a new
              machinery
       (ii)   Freight and Insurance on the new machinery
       (iii) Customs duty paid on import of machinery
       (iv)   Cartage paid to bring the new machine to factory
       (v)   Wages paid in connection with the erection of new machinery
       (vi)   Rs.1000 spent on repairing a second hand machine before put to use
       (vii) Rs.2000 spent to remove a worn out part and replace it with new one
       (viii) Rs.800000 spent on advertising the introduction of a new product in the market, the
              benefit of which will be effective for 3 to 5 years.
       (ix)   Rs.5000 spent on repainting the factory
       (x)   Heavy amount spent on research for a particular product which ultimately did not
              result in success.

8. Write short notes on (Any Four)
   (a) Accounting
   (b) True and Fair
   (c) GAAP
   (d) Personal accounts, Real accounts, Normal accounting
   (e) Profit and loss accounting

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3

University of Mumbai
Jamnalal Bajaj Institute of Management Studies
First Year First Semester 2009-2010
M F M / M M M / M H R D M / M I M
Sub : Organisational Behaviors

Saturday, 14-11-2009   (3 Hours)   (Total Marks 100

N. B. : 1. Question No. 1 is compulsory
   2. Attempt any **Four** questions from question numbers 2 to 8.
   3. All questions carry equal marks

1.   Case Study

2.   Explain the perceptual process with examples

3.   A firm employing 3000 employees and in the business of selling branded apparels faces unique motivational problem wherein managers and above are demoralized due to low pay and other conditions. Please suggest means to improve their morale using any one of the motivational theories. Explain this theory in details

4.   A MNC in India faces a typical leadership problem. The company is doing well in terms of sales / revenue and market growth but the parents company feels it lacks leadership at top level which will affect its working in the future. Suggest and explain a leadership theory (or more) to the MNC which will help tide over the situation.

5.   Explain the relevance of OB in today's organization.

6.   What is personality and also discuss its importance. What is A and B type of personality and its relevance in industry? Discuss trait theory in personality

7.   a) Discuss importance of team working and importance of Team Dynamics in organizations

   b) "Conflict is to same extent essential in an organization" Discuss

8.   Attempt any Two :
      a) Individual Value System
      b) Conflict Management
      c) Self Assessment
      d) Ethical Behavior
      e) Stress Management

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MMM/MFM/MHRDM/MIM I

M. MARKS: ~~100~~ 60   FINANCIAL ACCOUNTING   DURATION 3 HRS.

Question No one is compulsory
Solve any four from the Rest.
Prepare working notes wherever necessary
Duration Three hours

(20 Marks)

Question No One

A. (15 Marks)

From the following trial balance of M/s Jain Traders, you are required to prepare Trading, Profit & Loss A/c for the year ended 31st March 2012 and the Balance Sheet as on that date after taking in to account the additional information:

Particulars	Debit	Particulars	Credit
Bills Receivable Λ	19000	Sales	709280
Rent ΡL	11200	Commission	11200
Cash Λ	1000	Creditors L	121260
Bad Debts Ρ	7200	Capital L	238800
Returns	5560	Loan @ 15 % p.a.	40000
Travelling Expenses	3720		
Repairs	6900		
Insurance (Annual Premium `360)	800		
Salaries ΡL	22000		
Bank Balance Λ	59000		
Debtors	126000		
Furniture	17960		
Purchases ⌐	513200		
Wages ⌐	80000		
Discount	11600		
Machinery	56000		
Opening Stock ⌐	179400		
Total	1120540		1120540

Handwritten notes in margin: Gross loss 98860, Net loss 180560, B/S 261580

Adjustments:

I. Wages for two months are due T / L
II. Create provision for Discount on Debtors at 10% A/PL
III. Machinery is to be valued at `54,000/- after providing depreciation. A/PL
IV. Write off Bad debts `1,000/- and create 3% Provision for Bad Debts on debtors. A/PL
V. Goods costing `6,000/- were donated. The entry to be passed. T/PL
VI. Unrecorded Sales return `8,000/- T/
VII. Annual charge for travelling expenses is `5,720/-

B. True or False –give reasons (any five)- (5 Marks)
   i. Rent paid Account can show a credit balance.
   ii. To know the financial position of a business, trial balance is prepared.
   iii. If goods are dispatched to Rohan on behalf of and instructions of Mahesh, then Rohan's Account will be debited.
   iv. An account will have debit balance, if the total of debit side of an account exceeds the total of credit side of an account.
   v. Cash account always shows debit balance.
   vi. Goods Account can never show a credit balance.
   vii. Unexpired expenses are charged to Profit & Loss Account.

(10 marks)

Question No Two (Any two)
   a) State the nature and purpose of Financial Accounting
   b) indicate briefly the concepts and Conventions in Accounting.
   c) Journalise the following in the books of Shri Vaibhav

   2012

   March 1   Received gift of `51,000/- from father in law by cheque , which is deposited into business bank a/c.

   March 7   Sold goods at the list price of `5,000/- for cash at 10% Trade discount and 2% cash discount.

   March 23   Purchased T.V. from Smita Enterprises for household use for `13,000/- and paid half the amount from office and balance from personal bank account.

   March 27   One of our debtors, Shri Kulkarni who owes `200/- paid Rent `100/- on our behalf

   March 31   Purchased `2,000/- , 5% Govt security at 94%

(10 Marks)

Question No Three (Any Two)

   A. Define Capital Expenditure, Revenue Expenditure and Deferred Revenue expenditure.
   B. Explain the basic principles in allocating expenditure between Capital & Revenue.
   C. Distinguish, giving examples between Trial Balance and Balance sheet.

(10 Marks)

Question No Four (Any Two)

   A. What are the different methods of providing depreciation?
   B. Is it necessary to provide depreciation? If yes, then what are the reasons?
   C. Show the machinery account for the year ended 31st March 2011.
      A Ltd. Which depreciates its machinery @10% p.a. according to written down method (Reducing balance method) had on 1st April 2010 `4,86,000 balance in its machinery account. During the year ended 31st March 2011 the machinery purchased on 1st April 2008 for `60,000 was sold for `

FINANCIAL ACCOUNTING

Time : 11·00 to 2·00·

DURATION : 3 HOURS   12th November, 2011.   MARKS : 100

NOTES : 1. SOLVE ANY FIVE QUESTIONS.
2. ALL QUESTIONS CARRY EQUAL MARKS.

Q. 1 : Prepare Trading & Profit & Loss A/C of EARNWELL Ltd. for the year ended March 31, 2011 and the Balance Sheet as on that date from the following information and calculate it's net worth :

EARNWELL LTD.
TRIAL BALANCE

Transportation Charges	248756	Profit & Loss A/C	231546
Cash in Hand	4246	Sales	8752013
Furniture	150000	Share Premium	425500
Debtors	2246758	Bills Payable	378784
Computer Systems	388500	14% Debentures	500000
Business Promotion Expenses	592451	Creditors	2143587
Office Premises	863214	Dividend on shares	36500
Vehicles	421032	Provision for Taxation	652500
Purchases	6386102	Term Loan from Bank	258500
Travelling & Conveyance	302125	Loans from Directors	985787
Salaries	488231	General Reserve	345742
Shares in ABC Ltd.	200000	Share Capital	982540
Sales Returns	186523		
Postage & Courier	58213		
Printing & Stationery	24012		
Professional Charges	56500		
Telephone & Fax	132452		
Cash at Bank	31254		
Advance Tax	500000		
Stock (1.4.2010)	1265478		
Carriage Inward	102489		
Membership Fees	22500		
Advertisement	298503		
Loan to ABC Ltd.	150000		
Preliminary Expenses	250000		
Financial Expenses	201324		
Office Expenses	122336		
	15692999		15692999

Additional Information :

1. Closing Stock is valued at Rs. 1125452/-. However, the market value of the same is Rs. 903210/-.
2. Depreciate Computer Systems @ 60% p. a., Vehicles @ 15% p. a. & other assets @ 10% p. a.
3. Write off preliminary expenses Rs. 1,00,000/-
4. Outstanding Expenses are : Salaries Rs. 36,500/-, Audit Fees Rs. 50,000/-,
5. Financial Expenses do not include any debenture interest.
6. Authorised share capital of the company consists of 1,50,000 shares of Rs. 10/- each on which Rs. 7/- per share have been called. One shareholder holding 15,000 shares has paid the amount due on his shares in full (i. e. Rs. 10/- per share) which has been wrongly been credited to share capital a/c.
7. Provide tax @ 30%.
8. Transfer Rs. 1,00,000/- to General Reserve & provide dividend @ 10% on paid up capital if the profits are sufficient.

Q. 2 : From the following trial balance, prepare Manufacturing, Trading & profit & Loss A/C for the year ended March 31, 2011 and Balance Sheet as on that date :

SUN INDUSTRIES

TRIAL BALANCE

Particulars	Dr.	Particulars	Cr.
Stock (1.4.2010)	16,18,728	Sales	65,47,255
Furniture	2,32,480	Creditors	5,12,500
Plant & Machinery	14,48,722	Bills Payable	1,01,120
Debtors	5,47,142	Term Loan from Bank	12,03,742
Purchases	38,46,211	Loan from Mrs. Gandhi	5,00,000
Power & Fuel	1,28,209	Capital	14,01,993
Wages	2,28,755	Interest on FD	12,270
Computer Systems	2,00,000	Profit on sale of shares	25,311
Printing & Stationery	12,298		
Factory Rent	1,08,000		
Advertisement	1,27,285		
Selling & Distribution Expenses	5,12,989		
Salaries	1,22,250		
Travelling & Conveyance	1,01,178		
Repairs & Maintenance (Factory)	48,275		
Cash in Hand	18,180		
Cash at bank	32,150		
Other Manufacturing Expenses	78,950		
Transportation Charges	1,24,652		
Fixed Deposits with bank	50,000		
Bills Receivables	1,25,000		
Telephone & Fax	1,28,785		
Postage & Courier	12,955		
General Expenses	1,69,997		
Professional Fees	28,500		
Loans & Advances	2,20,000		
Staff loans	32,500		
	1,03,04,191		1,03,04,191

Additional Information:

1. Opening Stock consists of Raw Material Rs. 2,38,991; Work in Progress Rs. 5,03,219 and the balance of finished goods.
2. Closing Stock is valued at – Raw Material Rs. 4,02,198; Work in Progress Rs. 7,47,596 & Finished Goods Rs. 12,14,547.
3. Depreciate computer systems @ 60% p. a., Plant & Machinery @ 25% p. a. and other fixed assets @ 10% p. a.
4. Outstanding Expenses : Wages Rs. 22,370; Salaries Rs. 11,360; Telephone Expenses Rs. 5075; Audit Fees Rs. 11,000; Factory Rent Rs. 12,000.
5. General Expenses includes insurance of Rs. 12,000 paid for the year ended Sept. 30, 2006
6. Sun Industries is a partnership of Sunil, Ashok & Rohan sharing profits & losses in the ratio of 4:3:2 and the opening balances in their capital accounts are also maintained in the same ratio.

Q. 3 : State whether the following statements are true or false by giving reasons (Any four) :

a. Preference shareholders are given dividend after equity shareholders are given.
b. A partnership firm is a separate legal entity.
c. Going concern concept means the expenses or losses are to be recorded if anticipated but profit should be booked only if ascertained.
d. Balance Sheet reflects the summary of expenses and incomes for the year.
e. Only monetary transactions are reflected in financial accounting.
f. The authority of sanctioning of dividend lies with the Board of Directors.
g. Depreciation is a non cash charge.

Q. 4 : Journalise the following transactions :

a. Mr. Ravi commenced business with a capital of Rs. 150000/- brought in business in cash.
b. Purchased furniture worth Rs. 16500/- in cash from Arihant Traders
c. Paid Rs. 150000/- to Jyoti Stores, the supplier, by cheque in full settlement against the amount of Rs. 150640/-
d. Received Rs. 201500/- from Kiran Traders, the customer, by cheque against the dues of Rs. 201980/- in full settlement.
e. Deposited cash of Rs. 30,000/- in bank.
f. Written off bad debts of Rs. 1,03,500/-
g. Provided outstanding salary of Rs. 15,000/-
h. Received Rs.2,00,000/- as loan from Satish
i. Gave Rs. 25,000/- to staff as loan for his marriage.
j. Gave Rs. 50,000/- to Siddharth Traders as advance against purchases.

Q. 5 : Write short notes on (Any Four):

a. Journal;
b. Preference Share Capital
c. Balance Sheet
d. Calls in arrears
e. Non Convertible Debentures
f. Discount on issue of shares
g. GAAP;

Q. 6 : a. Discuss the types of share capital and explain how the paid up share capital is reflected in the Balance Sheet of a company.
b. Discuss the important characteristics of a company with special emphasis on limited liability concept.

Q. 7 : Distinguish between (Any Three) :

a. Tangible and Intangible assets

b. Partnership and company form of organisation

c. Equity share capital and Preference share capital

d. Owned capital and borrowed capital for a private limited company

e. Rights Issue and Bonus Issue

Q. 8 : Prepare Machinery A/C and Accumulated Depreciation A/C reflecting the following transactions under :

i. Straight Line Method and

ii. Written Down Method

from the following information :

The company purchased machines worth Rs. 34,50,000/- on 1.1.2006 and incurred Rs. 1,50,000/- on installation of the machine. The working life of the machine is 6 years and it is expected to fetch a scrap value of 10% of the cost at the end of it's working life.

The company sold a component worth Rs. 6,00,000/- on 31.10.08 for Rs. 4,52,500/-.

The company charges depreciation @ 20% p.a. under written down value method.

Q. 9 : a. A Ltd. has an authorized capital of 1500000 equity shares of Rs. 10/- each and 100000 preference shares of Rs. 100/- each. The company has issued all preference shares in full and collected full amount on the same. However, it has issued 80% of equity shares on which 75% amount has been called up. One shareholder holding 50,000 shares has not paid call money of Rs. 3/- per share and shareholder holding 20,000 shares has paid Rs. 10/- in full on his shares.

Prepare schedule of share capital as per the requirements of Schedule VI to the Companies Act, 1956 as it will be presented in the Balance Sheet.

b. Prepare the Vertical format of Balance Sheet and explain the concept of Net Worth and Working Capital.

DURATION : 3 HOURS   MARKS : 100

NOTES : 1. SOLVE ANY FIVE QUESTIONS.
          2. ALL QUESTIONS CARRY EQUAL MARKS.

Q. 1 : Prepare Trading & Profit & Loss A/C of Growmore Ltd. for the year ended March 31, 2010 and the Balance Sheet as on that date from the following information and calculate it's net worth :

GROWMORE LTD.
TRIAL BALANCE

Cash in Hand	4598	Sales	8162968
Computer Systems	246500	14% Debentures	500000
Purchases	4650748	Profit & Loss A/C	502141
Travelling & Conveyance	103524	Share Premium	258500
Furniture	254000	Dividend on shares	34100
Salaries	287965	Creditors	932650
Office Premises	1214500	Term Loan from Bank	321659
Vehicles	465214	Bills Payable	77632
Telephone & Fax	183190	Provision for Taxation	221452
Debtors	16287500	General Reserve	133450
Cash at Bank	109303	Share Capital	746850
Stock (1.4.2009)	688742	Loans from Directors	1222500
Printing & Stationery	22488		
Carriage Inward	92632		
Advertisement	263987		
Shares in ABC Ltd.	250000		
Transportation Charges	346514		
Advance Tax	500000		
Postage & Courier	63415		
Business Promotion Expenses	233457		
Membership Fees	25000		
Professional Charges	132500		
Sales Returns	246897		
Loan to ABC Ltd.	300000		
Preliminary Expenses	300000		
Financial Expenses	198521		
Office Expenses	301457		
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	13113902		13113902

Additional Information :

1. Closing Stock is valued at Rs. 1203125/-. However, the market value of the same is Rs. 1014125/-.
2. Depreciate Computer Systems @ 60% p. a., Vehicles @ 15% p. a. & other assets @ 10% p. a.
3. Write off preliminary expenses Rs. 100,000/-
4. Outstanding Expenses are : Salaries Rs. 32,500/-, Audit Fees Rs. 40,000/-, Professional Charges Rs. 10,500/-
5. Financial Expenses do not include any debenture interest.
6. Authorised share capital of the company consists of 1,00,000 shares of Rs. 10/- each on which Rs. 8/- per share have been called. One shareholder holding 22,000 shares has paid the amount due on his shares in full (i. e. Rs. 10/- per share) which has been wrongly been credited to share capital a/c.
7. Provide tax @ 40%.
8. Transfer Rs. 1,00,000/- to General Reserve & provide dividend @ 10% on paid up capital if the profits are sufficient.

Q. 2 : Prepare Manufacturing & Trading & Profit & Loss A/C for the year ended on March 31, 2010 and Balance Sheet as on that date from the following information :

M/S GATI INDUSTRIES

Purchases of raw material	48,64,680	Sales	86,63,958
Debtors	19,38,527	Dividend on shares	6,750
Cash in Hand	25,128	Creditors	12,01,785
Carriage Inward	49,330	Loan from Mrs. Joshi	5,45,000
Stock of Material (1.4.2009)	6,39,385	Interest on FD	6,048
Salaries	1,63,545	Mr. John' Capital A/C	7,46,742
Travelling & Conveyance	1,42,592	Bills Payable	3,38,411
Interest on loan	32,462	Term Loan from Bank	9,23,782
Power & Fuel	1,02,914		
Plant & machinery	12,46,488		
Water Charges	24,221		
Wages	3,01,002		
Telephone Charges	1,84,974		
Stock of WIP (1.4.2009)	2,45,996		
Printing & Stationery	42,010		
Computer System	2,64,000		
Repairs & Maintenance (Machine)	21,645		
Furniture	68,440		
Stock of Finished Goods (1.4.2009)	9,68,112		
Shares in X Ltd.	36,400		
Factory Rent	48,000		
Deposit for Office	6,40,000		
Insurance Charges (Factory)	22,500		
Internet Charges	16,500		
Vehicle Insurance	24,950		
Transportation Charges	2,72,475		
Professional Charges	15,000		
Bills Receivables	31,200		
	1,24,32,476		1,24,32,476

Additional Information :

1. Closing Stock is valued at : Raw Material Rs. 3,84,102/-; WIP Rs. 1,42,603/-; Finished Goods Rs. 6,74,211/-.
2. Depreciate computer systems @ 60% and all other assets at 10% p. a.
3. Outstanding Expenses are : Salaries Rs. 25,600/-, Audit Fees Rs. 30000/-; Telephone expenses Rs. 124317-; Wages Rs. 22550/-'& Water Charges Rs. 4,048/-.'
4. Provide RDD @ 3% on debtors.
5. Purchase returns of Rs. 42,312/- have not been recorded.
6. Interest on loan from Mrs. Joshi is to be provided for @ 14% p. a. for half year.

Q. 3 : State whether the following statements are true or false by giving reasons (Any four) :
a. Depreciation is a non cash charge.
b. Dividend is a tax deductible expenditure.
c. Tallying of trial balance is a test of accuracy of accounting entries.
d. The principle of consistency ensures that the results of different years remain comparable.
e. Financial accounting does not consider non monetary transactions.
f. Debentureholders are the real owners of the company.

Q. 4 : Write short notes on (Any Four):
    a. Journal;
    b. Equity Share Capital;
    c. Depreciation;
    d. GAAP;
    e. Appropriation of Profits
    f. Amortisation of Expenses
    g. Uncalled share capital

Q. 5 : a. Discuss the limitations of financial accouting.
    b. Explain the concepts and conventions under financial accounting.

Q. 6 : Distinguish between (Any Three) :
    a. Straight Line Method & Written Down Value methods of depreciation
    b. Fixed Assets and Current Assets
    c. Equity share capital and Preference share capital
    d. Profit & Loss Account and Balance Sheet
    e. Rights Issue and Bonus Issue

Q. 7 : Prepare Machinery A/C and Depreciation A/C reflecting the following transactions under :
    i. Straight Line Method and
    ii. Written Down Method
    from the following information :
    The company purchased machines worth Rs. 34,50,000/- on 1.1.2006 and incurred Rs. 1,50,000/- on installation of the machine. The working life of the machine is 6 years and it is expected to fetch a scrap value of 10% of the cost at the end of it's working life.
    The company sold a component worth Rs. 6,00,000/- on 31.10.08 for Rs. 4,52,500/-.
    The company charges depreciation @ 20% p.a. under written down value method.

Q. 8 : Present the following information in the form of a Journal :
   a. Mr. Anil commenced business with a capital of Rs. 50,000/- in cash and Rs. 12,500/- in the form of furniture.
   b. Mrs. Nayna purchased furniture worth Rs. 50,000/- from Nitin Sales on Credit.
   c. Deepa appointed Rajat as Sales Manager
   d. Rakesh received Rs. 12,125/- as dividend on shares by cheque.
   e. Prem paid Rs. 3,00,000/- by cheque to his supplier, M/S Rajesh Traders.
   f. Roma received Rs. 1,50,000/- by cheque from her customer, M/s Jain Traders, against the dues of Rs. 1,54,220/- in full settlement.
   g. M/S Novelty Traders wrote off dues of Rs. 12,500/- from Sainy traders as bad debts.
   h. Mr. Ajit issued cheque of Rs. 7500/- to his staff Mr. Ram against salary.
   i. Mr. John received a cheque of Rs, 20,00,000/- as loan from Citibank.
   j. Jagadish paid monthly instalment of Rs. 12,500/- on car loan consisting of Rs. 4678/- as interest and the balance as principal.

Q. 9 : Prepare ledger accounts and trial balance from the following transactions :

July 01, 2008 Mr. John commenced business with a capital of Rs.250000/- brought in business in cash and deposited a sum of Rs.140000/- out of the same in Bank.
July 02, 2008 He purchased goods worth Rs.680000/- from Gul Traders on credit.
July 03, 2008 He spent Rs.4500/- on freight to bring the goods to his godown.
July 06, 2008 He sold 60% of the goods to M/s. Rambo Traders at a profit of 25% on cost on credit.
July 08, 2008 He received 80% of his dues from his customer.
July 12, 2008 He issued a cheque of Rs.250000/- to his supplier.
July 18, 2008 He applied for sales tax registration.
July 22, 2008 He issued a cheque of Rs.5000/- to his consultant against professional fees.
July 27, 2008 He received the balance amount from his customer.
July 29, 2008 He issued a cheque of Rs.5000/- to his employee against salary.