

## FELLOWSHIP EXAMINATION

## MATHEMATICAL BASIS OF LIFE ASSURANCE

Time: 3 Hours]

[Total Marks : 100

Answer any FIVE questions only.  
All questions carry 20 marks each.

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1. a) Given that:  $A_x = 0.3801$  and  $P_x = 0.0211$  Marks  
5 each  
Find:-  $a_x$  and the rate of interest.
- b) What is mortality surplus?  
How does it arise ?  
Give expression for mortality surplus.
- c) Prove :- for endowment assurance policy  
$$P_x : \overline{n} = P_x : \overline{n} + P_x : \overline{1}$$
- d) A person now aged 30 has a Whole Life Assurance Policy for Rs. 15,000 issued to him 10 years ago. He now desires the policy to be altered to an Endowment Assurance policy for the same sum assured maturing at age 60. Find the net annual premium he has now to pay. The basis is LIC (1970 - 73). Ultimate mortality with 6% interest.
- $\ddot{a}_{30} = 15.618$  ;  $\ddot{a}_{20} = 16.371$  ;  
 $A_{30 : \overline{30}} = 0.19852$  ;  $\ddot{a}_{30 : \overline{30}} = 14.160$
2. On the basis of the LIC (1970-73) Ultimate Table at 6%, calculate the net annual premiums for a sum assured of Rs.1000 for the following assurances for a life aged 30. 5 each
- a) Whole Life Assurance.  
b) Whole Life Assurance, premiums limited to 20 years.  
c) Endowment Assurance for 25 years.  
d) Endowment Assurance for 25 years. Premiums limited to 15 years.
- Given:  $M_{30} = 19801.59$        $M_{55} = 12716.28$        $N_{30} = 2666994.53$   
 $N_{45} = 927313.11$        $N_{50} = 623195.21$        $D_{55} = 35573.26$   
 $N_{55} = 403807.17$

3. a) The following particulars are given :

10 each

$x$ (age)	25	26	27	28	29	30
$l_x$	97,380	97,088	96,794	96,496	96,194	95,887
$d_x$	292	294	298	302	307	313

interest = 6%

i) Workout commutation functions for ages 25 to 30.

ii) Calculate level annual premium :

a)  $P_{25} : \overline{2}|$       b)  $P_{25} : \overline{4}|$       c)  $P_{27} : \overline{3}|$

- b) The values of  $A_x$  on 3% interest basis are given below for a specified age range :

$x$	$A_x$
35	0.429
36	0.437
37	0.445
38	0.453
39	0.462

Calculate in a tabular form the values of  $a_x$  for all ages 35 to 39 to three decimal places.

4. a) Calculate office annual premium for an Endowment Assurance for Rs. 15,000 to a person aged 35 for 25 years. Provide for first year expenses at 50% of premiums and 15% Sum Assured and Renewal Expenses of 5% of premiums and 6% Sum Assured. 10 each
- b) Calculate office premium (annual) for a With Profit Endowment Assurance by providing a bonus loading of 20% Sum assured per annum.

**Given :**  $\ddot{a}_{35:\overline{25}|} = 13.086$  ;  $A_{35:\overline{25}|} = 0.25931$  ;

$$D_{35} = 12664.23 \quad R_{35} = 516333.68 \quad R_{60} = 132156.08$$

$$M_{60} = 10506.87 \quad D_{60} = 24604.43$$

5. On 1<sup>st</sup> January 1979, an Office issued a number of annual premium without profit policies to a group of lives each of whom was then aged 35. All the policies were for a term of 20 years and were of the following types:  
 Endowment Assurances under which the sum assured was payable on survival to the end of the term or on previous death.  
 Temporary Assurances under which the sum assured was payable only on death within the policy term.  
 Calculate the profit or loss from mortality for the calendar year 1988 in respect of the policies issued to this group of lives given the following data:

Type of Policy	Sums Assured existing on 31 <sup>st</sup> December 1988	Sums Assured discontinued by death during 1988
Endowment Assurance	Rs. 27,00,000	Rs. 17,000
Temporary Assurance	Rs. 15,40,000	Rs. 4,000

Basis: LIC (1970-73) Ultimate Table and 6% interest

Assume that there is no source of decrement other than death and that all claims are paid at the end of the year of death.

Given:  $q_{44} = .00420$        $\ddot{a}_{45:\overline{10}|} = 7.612$        $\ddot{a}_{35:\overline{20}|} = 11.864$   
 $A^1_{45:\overline{10}|} = 0.05190$        $P^1_{35:\overline{20}|} = .00401$

6. i) A whole life insurance of Rs.1000 is purchased on a life aged 80. The death benefits are payable at the end of the year of death. Mortality follows a select table with a one-year select period and the following values are provided

$$q_{[80]} = 0.5 * q_{80} \quad A_{80} = 0.67980 \quad A_{81} = 0.68952 \quad q_{80} = 0.1$$

Calculate the value of  $1000 * A_{[80]}$  for an interest rate of  $i = 0.06$

- ii) An individual aged 25 takes a pension policy with a term of 30 years. The policy requires payment of annual premiums in advance for two thirds of the policy term. On death, 10 times the annual premium is paid. On survival to the end of the term, a pension of Rs. 12,000 per quarter is paid in advance until the death of the policy holder. After vesting of pension no death benefit is paid.

Assumptions: Interest: 4% p.a Ignore expenses;  
Calculate the annual premium under the policy

$$\begin{aligned} \text{Given: } \ddot{a}_{25} &= 22.520 & \ddot{a}_{55}^{(4)} &= 16.989 & D_{45}/D_{25} &= 0.4494 \\ D_{55}/D_{25} &= 0.29606 & A_{25} &= 0.13886 & A_{55} &= 0.3895 \end{aligned}$$

7. i) A life insurance company has sold 1000 single premium endowment assurance policies to lives aged 30 for a policy term of 20 years and sum assured of Rs. 100,000 each. If the Company expects that 2 lives will die each year and it will earn an interest rate of 5% per annum, calculate the single premium. Assume that the Company incurs expense of 5% of the single premium only at the time of policy issue and death claims are paid at the end of the year. 8

$$\text{Given: } v^{20} = 0.37689$$

- ii) a) A person now aged 30 has a Whole Life Assurance Policy for Rs. 15,000 issued to him 10 years ago. He now desires the policy to be altered to an Endowment Assurance Policy for the same sum assured maturing at age 60. Find the net annual premium he has now to pay. The basis is LIC (1970-73) Ultimate mortality with 6% p. a. interest. 6
- b) In the data above, if the policyholder desires reduction in sum assured, keeping the premium payable as per the original contract unaltered, calculate the reduced sum assured. 6

$$\begin{aligned} \text{Given: } \ddot{a}_{20} &= 16.371 & \ddot{a}_{30} &= 15.618 & A_{30:\overline{30}|} &= .19852 \\ \ddot{a}_{30:\overline{30}|} &= 14.160 & A_{20} &= .07334 \end{aligned}$$

8. i) Explain valuation of Non-standard Plans. 5
- ii) What is meant by renewal expense ratio of an insurer ? 5  
Discuss the relationship of this ratio with the provision for expenses in a gross premium valuation.
- iii) A sub-standard life aged 40 effects an Endowment Assurance for Rs. 10,000 for a term of 25 years. The office has decided to accept the risk by charging extra premium calculated on basis of rating up of age by 5 years for first 6 years, by 3 years for next 8 years and by 2 years thereafter. Calculate extra annual premium. Basis LIC (1970-73) Ignore Exp. 10

**Given:**  $P_{40:25} = 0.02148$  ;  $\ddot{a}_{45:\overline{6}|} = 5.148$  ;  
 $\ddot{a}_{49:\overline{8}|} = 6.405$  ;  $\ddot{a}_{56:\overline{11}|} = 7.715$  ;  
 $D_{51} = 46739.97$  ;  $D_{45} = 68774.85$  ;  
 $D_{57} = 30829.16$  ;  $D_{49} = 53297.64$

—————**END**—————

**FELLOWSHIP EXAMINATION**  
**STATISTICS**

Time: 3 Hours]

[Total Marks : 100

Answer any **FIVE** questions only.  
All questions carry 20 marks each.

**(An extract from the table of areas of the standard normal curve  
between 0 and x is given at the end)**

- |  | <u>Marks.</u> |
|--|---------------|
| 1. The scores of candidates who appeared for certain test are normally distributed with mean 55 marks and standard deviation 15 marks. Minimum score for passing is 34 marks and second class is awarded to students with scores between 46 and 61 marks. Minimum marks required for distinction is 70. If 10000 students appeared, find : <ul style="list-style-type: none"> <li>a) Probability that a candidate selected at random scores at most 40 marks.</li> <li>b) Percentage of candidates who passed</li> <li>c) Number of candidates passing in Second Class.</li> <li>d) Number of Candidates scoring distinction.</li> </ul> | 5 each        |
| 2. Write short notes on : <ul style="list-style-type: none"> <li>a) Negative Correlation</li> <li>b) Spurious Correlation</li> <li>c) Cluster Sampling</li> <li>d) Judgment Sampling</li> </ul>  | 5 each        |
| 3. a) Fifteen Agency Managers are selected at random from 2 regions. Northern and Western, of a Life Assurance Company. The Agents recruited by the 15 Agency Managers are as shown below :  | 10            |

Agency Manager	Northern Region	Western Region
1.	98	39
2.	34	33
3.	94	54
4.	43	23
5.	77	31
6.	40	55

Agency Manager	Northern Region	Western Region
7.	36	31
8.	54	22
9.	57	89
10.	32	72
11.	49	65
12.	34	57
13.	98	24
14.	24	69
15.	59	36

Can it be concluded that the difference in Agency recruitment capacity of the Agency Managers of the two regions is significant ?

- b) There are two underwriters X and Y, working in a New Business section of a Branch Office of a Life Assurance Company. Underwriter X underwrites, on an average, 12 new business proposals per hour, whereas, underwriter Y underwrites, on an average, 8 new business proposals per hour. Moreover, it has also been experienced that, on an average 8% of the new business proposals underwritten by underwriter X results into early claims, and 12% of the new business proposals underwritten by underwriter Y results into early claims. 10
- i) What is the overall probability of a new business proposal being resulted into early claim ?
  - ii) If a new business proposal, selected at random, is found to be resulted into early claim, what is the probability that it was underwritten by underwriter Y ?

4. a) A Company is interested in knowing if there is significant difference in the average salary received by foremen in two divisions. It is believed that the salaries of the foremen are approximately normally distributed with Standard deviations approximately same. Based on the sample data from the two divisions, following observations were made. 10

	First division	Second division
Sample size	12 foremen	10 foremen
Average monthly Salary (Rs)	1050	980
Standard Deviation of Sample Salaries	68	74

If you are a Statistician in this company what will be your conclusion, at 5% level of significance ?

Write clearly the Hypothesis you are testing.

(Given :-  $t_{.05} = 2.086$  at 20 d. f.)

- b) A sample of 50 typical round trips of a truck in a transport company showed mean time of a trip 52 hours with a standard deviation 4 hours. Find the limits within which population mean of round trip lies almost certainly.
5. A Life Assurance Company opens five satellite offices (Extension counters) in the developing residential areas of a city. It also deploys specially trained Agency Managers to perform in these offices. The Annualised premium (Rupees, crores) procured by these satellite offices, through these Agency Managers, in a Financial Year, is given below :

#### AGENCY MANAGERS

Satellite Offices	A	B	C	D	E	Total
1	29	1	56	16	16	118
2	97	60	57	67	96	377
3	75	36	66	38	14	229
4	24	63	50	71	34	242
5	12	20	88	7	65	192
<b>Total</b>	<b>237</b>	<b>180</b>	<b>317</b>	<b>199</b>	<b>225</b>	<b>1,158</b>

Determine the effect of the areas of satellite office and the effectiveness of Agency Managers on the procured annualized premium.

6. Twenty life assurance policies are chosen at random from among the policies issued by a Branch Office of a Life Assurance Company. The 'Age at Entry' under these policies are found to be :

35	30	43	46	43	29	36	37	40	34
48	30	28	45	25	39	41	24	33	25.

Calculate average age at entry and variance in age at entry.

Also, determine the 90%, 95% and 99% confidence limits for the variance in age at entry of all the policies issued by the Branch Office.



7. Calculate 5 yearly and 7 yearly moving average for the data given below . Also calculate respective seasonal indices.

<b>Year</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>Observed Value</b>	220	208	156	210	218	240	230	220	228	244
<b>Year</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
<b>Observed Value</b>	260	254	244	236	260	280	270	260	254	270
<b>Year</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>
<b>Observed Value</b>	292	284	276	270	290	310	300	296	286	312

8. i) Prices paid and quantities consumed for groceries, vegetables, milk, cloth and cosmetics for the years - 2005 and 2010 are given below. Calculate :-

15

- i) Price Index using base year (2005) quantities as weights.
- ii) Price Index using current year (2010) quantities as weights.
- iii) Quantity Index using Base year (2005) prices as weights.
- iv) Quantity Index using current year (2010) prices as weights.
- v) Value Index.

<b>Commodity</b>	<b>Year - 2005</b>		<b>Year - 2010</b>	
	<b>Price</b>	<b>Quantity</b>	<b>Price</b>	<b>Quantity.</b>
Groceries	30	4	90	5
Vegetables	25	3	75	4
Milk	20	2	35	3
Cloth	100	5	75	6
Cosmetics	50	2	75	1

- ii) Write a short note on 'Problems in the Construction of Index Numbers ?

5

<b>TABLE SHOWING AREAS OF THE STANDARD NORMAL CURVE FOR VALUE OF 'X' BETWEEN '0' AND 'X'</b>			
<b>X</b>	<b>Area</b>	<b>X</b>	<b>Area</b>
0.05	0.0199		
0.10	0.0398	1.1	0.3643
0.20	0.0793	1.2	0.3849
0.30	0.1179	1.3	0.4032
0.40	0.1554	1.4	0.4192
0.50	0.1915	1.5	0.4332
0.60	0.2257	1.6	0.4452
		1.645	0.4500
0.70	0.2580	1.7	0.4554
0.80	0.2881	1.8	0.4641
		1.9	0.4713
0.90	0.3159	1.96	0.4750
		2.00	0.4772
1.00	0.3413	2.58	0.4951
		3.0	0.4987

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**FELLOWSHIP EXAMINATION  
GROUP INSURANCE & RETIREMENT BENEFIT  
SCHEMES**

Time: 3 Hours]

[Total Marks : 100

Answer any **FIVE** questions only.  
All questions carry 20 marks each.

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- |  | Marks   |
|--|---------|
| 1. Write short notes on : ( <b>Any four</b> )  | 5 each  |
| a) Irrevocable Trust   |         |
| b) Past service liability under Gratuity & Superannuation Schemes  |         |
| c) Group Selection and Group underwriting  |         |
| d) Insurable Interest under Group Schemes  |         |
| e) Why is defined benefit pension scheme losing its appeal.  |         |
| 2. 'Swati' Textiles has got insured superannuation Scheme with your insurance Company. The company has submitted claims under following members. As a group schemes manager how you will deal with these claims.           | 5 each  |
| a) An employee (Membership No. 107) resigned and joined the company where there is no insured superannuation scheme.   |         |
| b) An employee (Membership No. 111) resigned and joined the new company where there is insured superannuation scheme of your insurance company.  |         |
| c) An employee (Membership No. 113) voluntarily retired 3 yrs. prior to regular superannuation date.   |         |
| d) An employee (Membership No. 115) who has already attained his superannuation age, but his employer has granted extension of 3 yrs. and his company also desire to pay contribution against him during extended service. |         |
| 3. a) List out the retirement benefits usually provided by an employer to employee in India at present and explore according to you what more new benefits can be added?   | 10 each |
| b) Why and how Government encourages employers and employees for starting and continuing retirement benefit schemes?   |         |

4. a) State main methods available to employer for arranging for pension schemes for payment of pension to their employees? Compare advantages and disadvantages of each scheme, out of these Schemes which Scheme you will choose and why? 10 each
- b) State the Income tax position indicating relevant sections of Income-Tax Act, 1961
- i) Pension to employee
  - ii) Pension to widow
  - iii) Commuted value
  - iv) Employees contribution to approved Superannuation Fund
  - v) Interest on Superannuation Fund from the point of Fund.
5. a) "The hazard of premature death of the bread winner will cause sudden stoppage of income to the family. On the other hand living too long in old age after retirement is equally dreadful." 10 each  
Elucidate the statement. Suggest how to combat these economic insecurities.
- b) What are the main factors which contributed to the rapid growth of superannuation schemes?
6. Of late there is massive T.V. and News Paper Advertisements from the Government of India High Lighting measures undertaken to elevate people below poverty line. Name any three such measures recently introduced by the Government in this regard and discuss salient features of any one of them. 20
7. Explain the merits and demerits of single and annual premium basis of costing under Group Superannuation Schemes. Also enumerate as to how a reasonable benefit can be provided to the widow and children of the deceased employee, in the event of premature death of the employee. 20
8. In Group Insurance Schemes the general practice is to charge an average premium for every member. Discuss its merits, while elucidating the impact of experiences rating adjustment under such cases. 20

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**FELLOWSHIP EXAMINATION**  
**REINSURANCE**

Time: 3 Hours]

[Total Marks : 100

Answer any **FIVE** questions only.  
All questions carry 20 marks each.

	<b>Marks</b>
1. Distinguish between :	5 each
a) Treaty and facultative methods of Reinsurance	
b) Claims control and claims co-operation	
c) Hard and Soft markets	
d) Written and Earned premium.	
2. Discuss :	5 each
a) Cut through clause	
b) Clean cut method of RI accounting	
c) Line	
d) Securitisation	
3. a) The reinsurance scenario in India Post Liberalization has seen a special role of the National Reinsurer – GIC Re. Comment.	10 each
b) Differentiate between “Accounting Year Basis” and “Underwriting Year Basis” in Reinsurance Accounting.	
4. a) Discuss the crucial role of reinsurance in addressing the limitations to the law of large numbers, preserving the income from investment and insulating shareholders’ funds from unpredictable loss scenarios.	10 each
b) Explain the need for reinstatement provisions under excess of Loss Treaties.	
5. What are the objectives and considerations while designing a reinsurance programme.	20
6. Prepare 1 <sup>st</sup> Quarter, 2010 Reinsurance Account for First Surplus Fire Treaty from the following data :-	20
Premium	₹ 50,000
Portfolio Entry	-

		₹
Premium	-	60,000
Loss	-	30,000
Commission	-	40%
Taxes & Charges	-	1,500
Common a/c XL Premium	-	1%
Claims Paid	-	30,000
Common a/c XL recovery	-	10,000
Premium Reserve retained	-	40%
Premium Reserve released	-	15,000
Interest on Premium Reserve	-	300
Tax deducted on interest	-	30
Credit for cash loss paid	-	5,000
Reinsurance Share	-	1%

7. Discuss Reinsurance after liberalization of Insurance industry in India. 20
8. How premium rating for Excess Loss programme on exposure basis is determined? Explain with Pareto Loss Distribution analysis. 20

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**FELLOWSHIP EXAMINATION**  
**RISK MANAGEMENT**

Time: 3 Hours]

[Total Marks : 100

Answer any **FIVE** questions only.  
All questions carry 20 marks each.

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1. Write short notes on : 5 each
  - a) Phases of Disaster.
  - b) Goals of Finite Risk Reinsurance
  - c) Law of Large numbers
  - d) 3 fold approach to manage risks.
  
2. Write short notes on the following : 5 each
  - a) Insurance & ERM
  - b) Components of ERM
  - c) Briefly comment on the legal issues which were prevalent before and later influenced by the Bhopal Gas Tragedy.
  - d) Describe BCP with Suitable examples.
  
3.
  - a) What is meant by "Cost of Risk"? Explain the variables on which costs of Risks are dependent and provide suitable examples. 10 each
  - b) What are the basic components of a Risk Management Process? How does such a process aid any business enterprise?
  
4.
  - a) What factors weigh in deciding risk management process objectives? 10 each
  - b) Mention at least ten duties of a risk Manager.
  
5. Provide a detailed example of how you would build up on appropriate Risk Management Programme assuring you are the Head of Risk management of your organization. 20
  
6. Explain the key considerations to be employed while formulating and recommending a "Risk Retention and Transfer Strategy" for an enterprise. How will you select, implement and monitor the best technique out of various possible alterations ? 20

7. Management of ABC Ltd. wishes to know the method of valuing an owners direct property loss exposure. Elaborate and state which ones are preferred for risk management purposes. 20
8. MPT Ltd. is a tiles producing company with a labour force of 250. The management has asked the Risk Manager to evaluate the security and safety features in the factory from workers point of view. Elaborate the points that would be covered. 20

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**FELLOWSHIP EXAMINATION**  
**LAW AND ECONOMICS OF INSURANCE**

Time: 3 Hours]

[Total Marks : 100

Attempt at least 2 questions each from Section 'A' and Section 'B'.

Total Questions to be attempted are 5 only.

All questions carry 20 marks each.

<u>Section- 'A'</u>		Marks
1.	a) What are the circumstances under which a 'Consent' is said to be free in a contract? b) Can a married woman enter into a contract? Explain in detail the consequences of such a contract. c) A Contract of Insurance is not a wagering contract : Do you agree with this statement? If so, why? d) Explain in detail with examples the concepts of "Frustration of Contract."	5 each
2.	a) What is a contract of guarantee? When does a surety get discharged in a contract of guarantee? b) A contract of insurance is a contract of "Uberrima Fides." Explain in detail the concept of Uberrima Fides. c) What is an Assignment? What are the rights of an assignee? Can he make nomination? d) Can an Insurance Agent procure business before obtaining licence? Is the insurer barred from paying commission in such cases?	5 each
3.	Describe the following : a) How agency is created? b) Arbitration clause applicable to insurance policies.	10 each
4.	a) Explain the necessity of compliance with section 64 VB of Insurance Act. b) Discuss the relaxations of section 64 VB permissible under the said statute.	10 each

**Section 'B'**

5. Profits can be maximised by bringing down the costs of production. Do you subscribe to this view? What are the various costs of production? 20

6. Discuss in detail the determinants of elasticity of demand of a commodity? 20
7. Monopoly affects the quality of product. Is it so? Critically examine nationalisation vis-à-vis privatisation of Insurance Industry in India. 20
8. Write short notes on the following : 5 each
- a) Accord and satisfaction
  - b) Hereditary commission
  - c) Oligopoly
  - d) Prohibition of rebates

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MAY, 2011

**FC-88**

**FELLOWSHIP EXAMINATION  
MARKETING AND PUBLIC RELATIONS**

Time: 3 Hours]

[Total Marks : 100

Answer any **FIVE** questions only.  
All questions carry 20 marks each.

(Note : Answer to questions pertaining to the Insurance Industry may be given with reference to either Life or General Insurance Industry)

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- |   | Marks   |
|---|---------|
| 1. Distinguish between :-   | 5 each  |
| a) Selling and Marketing.   |         |
| b) Needs and Wants  |         |
| c) Interchangibility and Inseparability.  |         |
| d) Public Relations and Advertising.  |         |
| 2. Write short notes (about 50 words) on the following:-  | 5 each  |
| a) Components of the Marketing Mix.   |         |
| b) Marketing Strategies.  |         |
| c) Product Obsolescence   |         |
| d) Pricing of Products and Services   |         |
| 3. Elaborate the following :  | 10 each |
| a) Barriers to Entry  |         |
| b) Moment of Truth  |         |
| 4. a) Explain the difference between satisfaction and expectations.   | 10 each |
| b) What are the sources of satisfaction ?   |         |
| 5. What is "Product Life Cycle"? Explain with examples.   | 20      |
| 6. i) Relationship Marketing is a key to success for any Insurance Industry. Examine the statement.   | 10 each |
| ii) Explain the scope for development of Rural Markets for Life Insurance Industry.   |         |
| 7. Direct Marketing is need of the hour for Insurance Industry. Critically examine the Statement with reference to pros and cons of the same. | 20      |

8. Distinguish between:-
- i) Goods and Services
  - ii) Direct Marketing and Promotion
  - iii) Individuals and Collectives
  - iv) Evaluation and Perception

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## FELLOWSHIP EXAMINATION MANAGEMENT ACCOUNTING

Time: 3 Hours]

[Total Marks : 100

Question **ONE** is compulsory. Total questions to be attempted are **FIVE**. All questions carry 20 equal marks.

- |    |  | Marks   |
|----|--|---------|
| 1. | a) What are the prudential norms for Investment by Insurance Companies in various Asset Classes.<br>b) Define Life Insurance business as per Insurance Act 1938.<br>c) Why adjustments to trial balance becomes essential while preparing Final Accounts ?<br>d) Explain the cost audit. How it is useful to the Management. | 5 each  |
| 2. | Write short notes on :<br>a) Reporting segment in Life Insurance business<br>b) Net Lapse Ratio in Life Insurance business<br>c) Safety margin<br>d) I B N R Claims.   | 5 each  |
| 3. | a) Explain Pay back method for Capital appraisal.<br>b) A Company is considering 2 mutually exclusive projects , Project I and Project II. Project I costs Rs. 30,000 and Project II Rs. 36,000. Net present value probability distribution for each project is given below.   | 5<br>15 |
- 
- | Project I      |             | Project II     |             |
|----------------|-------------|----------------|-------------|
| N P V Estimate | Probability | N P V Estimate | Probability |
| 3000           | 0.1         | 3000           | 0.2         |
| 6000           | 0.4         | 6000           | 0.3         |
| 12000          | 0.4         | 12000          | 0.3         |
| 15000          | 0.1         | 15000          | 0.2         |
- 
- i) Compute the expected N P V of Project I and Project II
  - ii) Compute risk i.e. Standard deviation for each project.
  - iii) Which Project is risky and Why ?

4. a) What are the guidelines for recognising non performing assets in insurance industry by IRDA. 10 each  
 b) What do you understand by Double Entry Accounting System? Elaborate books of accounts maintained as per double entry accounting system.

5. New Age Shirts manufactures readymade Shirts for export customers. Standard Cost per Dozen shirts are. 20

	<b>Rs.</b>
Material (Cloth) 24 mtrs @ Rs. 11	264
Labour 3 hrs. @ Rs. 49	147
Other expenses 3 hrs. @ Rs. 40	120
Standard Cost per Dozen shirts	531.

During Dec. 2010 Company worked on 3 orders.

Cost records are as below:

		<b>Cloth</b>	<b>Hrs. worked</b>
U. K.	1700 Dozens	40440 mtrs.	5130
U S	1200 Dozens	28825 mtrs.	2890
Canada	1000 Dozens	24100 mtrs.	2980

- i) Company bought 95,000 mtrs. cloth @ Rs. 10,64,000  
 ii) Labour cost in Dec. 2010 is Rs. 5,50,000, labour paid at Rs. 50 per hour.  
 iii) Overheads Rs. 456000 40% fixed and 60% variable. Overheads are applied on the basis of direct labour hours.  
 iv) Rs. 57,60,000 are budgeted overheads for 2010. Assuming normal production capacity of 48,000 dozen shirts p. a.  
 v) During Dec. 2010 U. K. and Canada orders completed . For U S 80% job completed.
- a) Compute Standard Cost per Dozen Shirts and for U. K., U. S. and Canada orders seperately.  
 b) Calculate Material Price Variance, Labour Rate Variance, Fixed Overhead Volume Variance and variable overhead variance.
6. i) Tallied Trial Balance does not mean Accurate Accounting. - Discuss. 20  
 ii) Comparative Balance Sheets and Profit and Loss Account of Saraswati Corporation are given below. Prepare Cash Flow Statement by using Direct Method.

(Rs. in Lakhs)					
Liabilities	31.03.09	31.03.10	Assets	31.03.09	31.03.10
Share Capital	50	50	Fixed Assets	180	190
Reserves	60	70	Inventories	70	60
Long term Debt	95	80	Sundry Debtors	60	70
Short term -					
Bank Borrowings	70	80	Bank Balance	20	15
Creditors	50	60	Furniture,		
Provisions	20	15	I. T. Hardware	15	20
	<b>345</b>	<b>355</b>		<b>345</b>	<b>355</b>

7. Explain Income Tax provisions for Life Insurance Business from relevant sections of Income Tax Act. 1961. 20
8. From the Trial Balance of Vidhyachal Life Insurance as at 31.03.10 and additional information prepare Revenue A/c for the year ending and Balance Sheet as on date. 20

(Rs. in Lakhs)			
		Debit	Credit
Claims less Reinsurance :		Premium	106
Death	64	Interest, Dividends and Rent	19
Maturity	87	Sundry Creditors	12
Bank Balance	33	Share Capital	35
Management Expenses	16	Life Fund	189
House Property	42		
Policy loans	13		
Investments	58		
Advance Tax Paid	11		
Commission	22		
Furniture Fixtures	15		
	<b>361</b>		<b>361</b>

- i) Market value of investment is Rs. 77
- ii) Outstanding Claims to be provided Rs 26 for Death and Rs. 19 for Maturity.
- iii) Calculate Depreciation @10% on Furniture & Fixture @ 5% on House Property.
- iv) Provide for Income Tax Rs. 16
- v) Dividend Declared Rs. 6 but not received by Company.

**OR**

8. From the Trial Balance of Fortune Insurance Co. Ltd. prepare Revenue Accounts, Profit and Loss Account, Profit and Loss Appropriation Account for the year ending 31.03.10 and Balance Sheet as on date. 20

(Rs. in Lakhs)

Claims Paid :		Share Capital	25
Fire	49	Catastrophic Reserve	7
Marine	22	Premium Net :	
Misc.	18	Fire	188
Commission Paid :		Marine	144
Fire	22	Misc.	74
Marine	24	Interest, Dividend and Rent	21
Misc.	41	Balance Fund :	
Management Expenses :		Fire	47
Fire	13	Marine	39
Marine	12	Misc.	29
Misc.	8		
Investments	283		
Building	16		
Bank Balance	66		
	<u>574</u>		<u>574</u>

(Rs. in Lakhs)

- |   |         |
|---|---------|
| i) Provision for taxation   | Rs. 24  |
| ii) Unexpired risk 50% for Fire and Misc. and 100% for marine insurance |         |
| iii) Prepaid Management expenses  | Rs. 42  |
| iv) Market value of Investments   | Rs. 312 |
| v) Outstanding Claims   |         |
| Marine  | Rs. 16  |
| Misc.   | Rs. 8   |

-----THE END-----



MAY, 2011

**FELLOWSHIP EXAMINATION  
HUMAN RESOURCES MANAGEMENT**

Time: 3 Hours]

[Total Marks : 100

Answer any **FIVE** questions only.  
All questions carry 20 marks each.

- 
- |   | Marks   |
|---|---------|
| 1. Discuss how the following processes facilitate successful Manpower Planning:   | 5 each  |
| a) Recruitment  |         |
| b) Job Description  |         |
| c) Succession Planning  |         |
| d) Transfer and Promotion   |         |
| 2. What do you understand by the following?   | 5 each  |
| a) Unlearning   |         |
| b) Performance Appraisal  |         |
| c) Leadership Continuum   |         |
| d) Johari Window  |         |
| 3. a) Comment on the impact of internal communication on employee motivation and productivity.  | 10 each |
| b) Enumerate the barriers to communication and suggest steps for improving communication with specific reference to your company/organisation.                |         |
| 4. a) Explain the different types of Performance Appraisal systems.   | 12      |
| b) Which Performance Appraisal system, in your opinion, is suitable to insurance organisation.  | 8       |
| 5. a) What, in your opinion, is positive discipline.  | 4       |
| b) Give two examples each of Minor and Major Penalties.   | 4       |
| c) State the steps which you as a Disciplinary Authority, would take before imposing major penalty to ensure that Principles of Natural Justice are followed. | 12      |
| 6. Discuss different theories of Leadership and explain which type of Leadership is more appropriate to your organization.                                    | 20      |

7. a) Analyse the HR initiatives being taken in your organisation to improve productivity and grievance redressal. 12
- b) Suggest HR initiatives for keeping the industrial relations harmonious. 8
8. Retention of quality manpower is a major concern in the modern economy. How will you as a HR Manager overcome this if there is a constraint in increasing wages? 20

-----THE END-----

**FELLOWSHIP EXAMINATION**  
**LEGAL ASPECTS OF INDUSTRIAL RELATIONS**

Time: 3 Hours]

[Total Marks : 100

Answer any **FIVE** questions only.  
 All questions carry 20 marks each.

		<b>Marks</b>
1.	a) Enumerate the remedies available to a citizen for enforcement of his fundamental rights. b) It is said that Natural justice differs from Social Justice. Do you agree with this statement? Justify your answer. c) Can there be an Industrial Dispute after closure of the industry? d) Is University an Industry? What was the decision of Supreme Court in the case of University of Delhi V/s Ramnath (AIR 1963 SC 1873)	5 each
2.	a) What was the ratio laid down by the supreme court in the case of A.V. Nachne v/s Union of India? b) When does a single employee's case might develop into an industrial dispute? Examine the issue in the light of Supreme Court decision in Banerjee v/s Mukherji (AIR 1953 SC 58) c) Define wages under Industrial Dispute Act, 1947. d) What does Section 36A of Industrial Disputes Act 1947 indicate.	5 each
3.	a) Define "Award". When does an award commence? What are the penalties for breach of settlement or award? b) Define the term "Strike". How does it differ from "Lock Out"?	10 each
4.	Discuss the terms 'Continuous Service' under the following Acts. a) Payment of Gratuity Act, 1972 b) Industrial Disputes Act, 1947	10 each
5.	The Industrial Disputes (Amendment) Act, 1982 has made certain significant changes in the Principal Act. Enumerate the important changes brought out by the amendment.	20

6. Define and describe in detail the provisions of Unfair Labour Practice. 20
7. What are the main objects and important provisions of shops and Establishment Act? 20
8. What are the legal provisions for entitlement of gratuity? Explain in detail the conditions under which the Employer can forfeit wholly or partly the gratuity payable to an employee? What is the legal provision with regard to recovery of gratuity? 20

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MAY, 2011

**FC-98**

**FELLOWSHIP EXAMINATION  
ADVANCED INFORMATION TECHNOLOGY**

Time: 3 Hours]

[Total Marks : 100

Answer any **FIVE** questions only.

All questions carry 20 marks each.

(Template is not required for drawing flow charts.)

- 
- |  | Marks   |
|--|---------|
| 1. Write short notes on:   | 5 each  |
| a) Business Intelligence and Spreadsheet Analysis  |         |
| b) Impact and Non-Impact Printers  |         |
| c) Random Access Memory and Cache Memory   |         |
| d) Operating System - Linux  |         |
| 2. Describe the followings:  | 5 each  |
| a) Network Topologies and Types of Topologies  |         |
| b) JAVA  |         |
| c) On-Line Transaction Processing System   |         |
| d) e-mail  |         |
| 3. a) Explain in brief the difference between LAN and WAN  | 10 each |
| b) Explain in Brief Business Process Outsourcing   |         |
| 4. a) What is System Audit? Explain,   |         |
| b) SQL - Explain.  | 10 each |
| 5. While defining Computer Security Policy, the risk profile relating to entire system has to be studied - Considering this statement design Computer Security Policy for Insurance Company. | 20      |
| 6. Explain Data Warehousing and Data Mining? Explain how data warehouse is built up and how the data is retrieved by using data mining tool.   | 20      |
| 7. E-Insurance will change the traditional method of transacting insurance business. Discuss.  | 20      |

8. The Relational approach in Database Management System is the most widely used. Why? Illustrate this model using an example. 20

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MAY, 2011

**FC-99**

**FELLOWSHIP EXAMINATION  
ASSET MANAGEMENT**

Time: 3 Hours]

[Total Marks : 100

Answer any **FIVE** questions only.  
All questions carry 20 marks each.

- 
- |   | Marks   |
|---|---------|
| 1. Write short notes on :   | 5 each  |
| a) Primary Markets  |         |
| b) Non Resident Indians   |         |
| c) Inflation Risk   |         |
| d) Moving Averages  |         |
| 2. Distinguish between :  | 5 each  |
| a) Yield to maturity and Holding period yield.  |         |
| b) FERA and FEMA  |         |
| c) Open ended and close ended mutual fund schemes.  |         |
| d) Role of RBI as banker to the government and as currency authority.   |         |
| 3. a) Discuss, with references to equity valuation, the constant growth model or the Gordon Model.  | 10 each |
| b) Victory Ltd. is expected to grow at 10% per annum. Company is likely to declare a dividend of Rs. 5/- next year. If the required return is 15%, what will be the price now?  |         |
| 4. a) CAPM helps us understand the basic risk-return trade offs - Discuss.  | 10 each |
| b) What are the problems in portfolio management?   |         |
| 5. Describe the structure and role of SEBI in the security market.  | 20      |
| 6. Mr. X began investing in securities on 01/01/2000 with an initial investment of Rs. 50 lakh. During the course of the year he received interest and dividend of Rs. 3 lakh which he utilised for his personal expenses. In the later part of the year, he also sold shares worth Rs, 10 lakh to finance part of the cost of a house that he was building. On 31/12/2000, Mr. X finds that his shares are worth Rs. 40 lakhs and he also holds debentures worth Rs. 5 lakh. What is the return earned by him during the year? | 20      |

7. Interest rates depend not only on the duration but also on the expectations of the investors in future. Explain with reference to the hypothesis commonly used. 20
8. An analysis of the past prices and the market index help in predicting the market - Discuss highlighting a few tools used in technical analysis. 20

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