

OCTOBER, 2010

FELLOWSHIP EXAMINATION
 MATHEMATICAL BASIS OF LIFE ASSURANCE

Time: 3 Hours]

[Total Marks : 100

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

1. i) A mortality table has a select period of three years. Calculate ${}_{3|}p_{53}$ Marks
5
 given that :-

$$\begin{aligned}
 q_{[50]} &= 0.015 & 2p_{[50]} &= 0.95 \\
 {}_{21}q_{[50]} &= 0.025 & {}_{2|3}q_{[50]+1} &= 0.092
 \end{aligned}$$

- ii) If $l_{40} = 1000$ and $l_{40+t} = l_{40} - 5t$ for $t = 1, 2, 3, \dots, 10$ 5

Calculate the value of $A_{40:\overline{10}|}$ at 6% p.a. interest.

Given: $a_{\overline{10}|} = 7.3601$, $v^{10} = 0.55839$

- iii) Of two persons 'A' aged 35 and 'B' aged 42 find the probability that : 10
- A and B both survive 10 years
 - A and B both die within 10 years
 - One of the two lives survives 10 years while the other dies within that period.
 - At least one survives 10 years .

Given : $l_{35} = 973550$ $l_{45} = 946656$
 $l_{42} = 904837$ $l_{52} = 904837$

2. a) A sum of Rs.1000 is due at the end of 10 years 6 months. The present interest rates are 7% p.a. but it is expected that there will be a fall in interest rates after 6 years bringing down the rate to 6% p.a. Find the present value of the sum of money under these assumptions. 5

Given :- $v^{4.5} @ 6\% = 0.7693$; $v^6 @ 7\% = 0.6663$

- b) Repeat the above calculations if in the above problem the rates of interests are 5% p.a. convertible half-yearly and 6% p.a. convertible quarterly in place of 7% p.a. and 6% p.a. respectively. 7

Given :- $V_{@ 5.0625\%}^{4.5} = 0.8007$ $V_{@ 6.1363\%}^6 = 0.6995$

- c) Find the gross and net rates of interest earned by a life insurance company in a certain financial year, given the following particular from the revenue account of the financial year. 8

| | Rs. |
|--|------------|
| Fund at 1 st April 2009 | 50,00,000 |
| Premium income during financial year 2009-10 | 5,00,000 |
| Claim and Surrenders | 2,50,000 |
| Expenses of Management | 50,000 |
| Gross interest earned | 3,60,000 |
| Income tax | 80,000 |

3. A loan of Rs.10,000 is to be repaid over 20 years by equal yearly instalments. The instalments of repayment give the lender an effective rate of interest @ 15% per annum on his capital throughout and enable him to replace the Capital by a fund Sinking to accumulate at an effective rate of 10% per annum. 5 each

Find :-

- a) the yearly instalment,
- b) Capital Contained in 10th instalment,
- c) Interest Contained in 15th instalment,
- d) the principal repaid after 16 instalments have been paid.

Given : at 10% $a_{\overline{20}|} = 8.5136$, $v^{11} = .35049$, $v^6 = .56447$

$$a_{\overline{4}|} = 3.1699$$

4. i) Explain in words what is meant by ${}_5|_3 \overset{9}{V}_{[35]+1}$ for a 2 year select mortality table calculate its value given that : 6

$$l_{41} = 28305 \quad l_{45} = 27005 \quad l_{[35]+1} = 29800$$

- ii) List the stages involved in construction of mortality table. 5

- iii) A mortality is to be constructed by using census method.

The following data has been extracted :

| Age last Birthday on Census date | No. of in-force policies as at 01.04.2008 Curtate duration | | | No. of in-force policies as at 01.04.2009 Curtate duration | | | Deaths during 01.04.08 to 01.04.09 Curtate duration | | |
|----------------------------------|--|------|-----------|--|------|-----------|---|---|-----------|
| | 0 | 1 | 2and more | 0 | 1 | 2and more | 0 | 1 | 2and more |
| 25 | 1510 | 1020 | 8050 | 1820 | 1670 | 8900 | 9 | 6 | 90 |
| 26 | 1620 | 1010 | 7510 | 1780 | 1650 | 8800 | 8 | 7 | 85 |

Find the values of :

- a) $q_{[25]}$
 b) $q_{[24]} + 1$
 c) q_{25}

5. Calculate for life aged 25 for 1000 Sum assured :-

4 each

- a) Net Single Premium for a 20 year Temporary Assurance.
 b) Net annual premium for 20 year Limited Payment Whole Life Assurance.
 c) Net annual premium for Double Endowment Assurance for 20 years
 d) Net annual premium for Endowment Assurance for 20 years, premium limited to 10 years.
 e) Net annual premium for a deferred Temporary Assurance which is to commence at age 30 and then to continue for 10 years and payable for 20 years.

| Given :- | x | D_x | M_x | N_x |
|----------|-----|-------|-------|---------|
| | 25 | 38080 | 16470 | 1040000 |
| | 30 | 34860 | 15540 | 832600 |
| | 35 | 30200 | 14630 | 637000 |
| | 40 | 25830 | 13720 | 482100 |
| | 45 | 22870 | 12580 | 353300 |

6. a) Prove that :

5 each

$$i) {}_tV_{x:\overline{n}|} = \frac{P_{x+t:\overline{n-t}|} - P_{x:\overline{n}|}}{P_{x+t:\overline{n-t}|} + d}$$

$$ii) {}_tV_{x:\overline{n}|} = 1 - \frac{\ddot{a}_{x+t:\overline{n-t}|}}{\ddot{a}_{x:\overline{n}|}}$$

- b) i) Given that $A_x = .7115$ and $P_x = .0395$ 5 each

Find a_x and rate of interest.

- ii) Calculate the true quarterly premium for a Whole Life Assurance of Rs.40,000 on the life of (30). Death benefit is payable immediately on death.

Given : at 6% $P_{30} = .00742$

7. a) Describe the 'Selection against the Insurer'. 4
 b) Calculate office single premium under a 2 year Temporary Assurance for sum assured Rs.50,000/- on age 30 years. Provided for expenses at 8% of single premium and 3% sum assured. 6

Given : @6% $M_{30} = 19801.59$,
 $M_{32} = 19374.88$,
 $D_{30} = 170763.39$

- c) The net annual premium ceasing after 15 years or at previous death for a money back policy on (45) is to be Rs.700/-. 10

Calculate office annual premium by providing following expenses :-

| First year expenses | | Renewal expenses |
|---------------------|-----|------------------|
| On Premium | 50% | 5% |
| On Sum Assured | 15% | 6% |

Bonus loading of 20% sum assured required. Sum assured is Rs.5000.

Given : @6% $N_{45} = 927313.11$ $N_{60} = 249057.31$
 $D_{45} = 68774.85$ $D_{60} = 24604.43$
 $R_{45} = 339218.67$ $R_{60} = 132156.08$
 $M_{60} = 10506.87$

8. a) i) If P_x is the annual premium under a whole life assurance family to a life aged x , then show that : 4
 $(tV_x + P_x) (1 + i) = {}_{t+1}V_x + q_{x+t} (1 - {}_{t+1}V_x)$

- ii) Explain the above by general reasoning. 2
- iii) Explain what is meant by 'actual death strain' and 'expected death strain' 2
- b) A 20 year special endowment assurance policy is issued to a group of lives aged 45 exact. Each policy provides a sum assured of Rs.10000 payable at the end of year of death or Rs.20000 payable if the live survives until the maturity date. Premiums on the policy are payable annually in advance for 15 years or until earlier death. 12

- Given that :** i) Number of deaths during the 13th policy year = 4.
 ii) Number of policies in force at the end of 13th policy year = 195

Calculate the profit or loss arising from mortality in 13th policy year and comment on your results.

$$\ddot{a}_{45:\overline{15}|} = 11.386 ; \quad A_{45:\overline{20}|} = 0.46998 ; \quad V_{20}^{20}P_{45} = 0.41075;$$

$$\ddot{a}_{58:\overline{2}|} = 1.955 ; \quad A_{58:\overline{7}|} = 0.76516 ; \quad V_7^7P_{58} = 0.71209;$$

$$q_{57} = 0.00565$$

—————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)**

Marks

1. a) Two unbiased dice are thrown. What is the probability that the product of 10 each numbers appearing on upper faces lies between 7 and 13 ?
- b) A manufacturing firm produces units of a product in four plants. Define event A_i as a unit is produced in plant $i = 1, 2, 3, 4$ and event B as unit is defective. From the past records of the proportions of defective units produced at each plant, the following conditional probabilities are set :
- $\Pr. (B/A_1) = 0.05$, $\Pr. (B/A_2) = 0.10$, $\Pr (B/A_3) = 0.15$ and $\Pr. (B/A_4) = 0.02$.
- The first plant produces 30 percent of the units of the product, the second plant 25 percent, third plant 40 percent and fourth plant 5 percent. A unit of the product taken randomly is tested and is found to be defective. Find the probability that the unit was produced
- i) in plant 1,
ii) in plant 4.

2. a) A population of size 800 is divided into 3 strata. Their sizes and S. d. are given below :

8

| Strata → | I | II | III |
|----------|-----|-----|-----|
| Size → | 200 | 300 | 300 |
| S. d. → | 6 | 8 | 12 |

A stratified random sample of size 120 is to be drawn from this population. Determine the sizes of samples from three strata in case of :

- i) Proportional allocation
ii) Optimum allocation.

b) Write short notes on the following :

12

- i) Sampling bias
- ii) Multi stage sampling
- iii) Convenience sampling.

3. a) Calculate the seasonal indices using the method of moving average for the data given below:

12

Quarterly output of coal for four years (in '000 tons)

| Year | Quarter I | Quarter II | Quarter III | Quarter IV | Total |
|----------------|------------|------------|-------------|------------|-------------|
| 2006 | 75 | 60 | 54 | 59 | 248 |
| 2007 | 86 | 65 | 63 | 80 | 294 |
| 2008 | 90 | 72 | 66 | 85 | 313 |
| 2009 | 100 | 78 | 72 | 93 | 343 |
| Total : | 351 | 275 | 255 | 317 | 1198 |

b) Derive the equation of trend line and show how you will obtain trend value for each quarter.

8

4. The following table shows the lives (in hours) of four batches of electric bulbs.

20

| Batch | Life (in hours) of bulbs | | | | | | | |
|-------|--------------------------|------|------|------|------|------|------|------|
| 1 | 1600 | 1610 | 1650 | 1680 | 1700 | 1720 | 1800 | - |
| 2 | 1580 | 1640 | 1640 | 1700 | 1750 | - | - | - |
| 3 | 1460 | 1550 | 1600 | 1620 | 1640 | 1660 | 1740 | 1820 |
| 4 | 1510 | 1520 | 1530 | 1570 | 1600 | 1680 | - | - |

Perform an Analysis of Variance of these data and show that the batches are homogeneous at 5% and 1% level of significance.

Given $F_{.05} = 3.05$ and $F_{.01} = 4.82$ at 3 and 22 d.f.

5. a) Using the data given below, calculate the following indices for the year 2009 taking 2004 as base year.

| Commodity | Year 2004 | | Year 2009 | |
|-----------|-----------|----------|-----------|----------|
| | Price | Quantity | Price | Quantity |
| A | 2 | 8 | 4 | 6 |
| B | 5 | 10 | 6 | 5 |
| C | 4 | 14 | 5 | 10 |
| D | 2 | 19 | 2 | 13 |

- i) Simple Price Index 2
 ii) Laspeyres' Price Index 3
 iii) Paasche's Price Index 3
 iv) Fisher's Price Index 3
- b) Write short notes on the following :
 i) Sampling Errors 6
 ii) Non-Sampling Errors. 3

6. For the data given in the following Table :

- a) Calculate the co-efficient of correlation between x and y . 8
 b) Find the equation of regression line of y on x and estimate the value of y when $x = 10.5$ 6
 c) Find the equation of regression line of x on y and estimate the value of x when $y = 15.5$ 6

| | | | | | | | | | |
|--------------------------|----|----|----|----|----|----|----|----|----|
| Variable $x \rightarrow$ | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Variable $y \rightarrow$ | 15 | 15 | 16 | 19 | 17 | 18 | 16 | 18 | 19 |

7. a) The incidence of an occupational disease in an industry is such that the workers have a 20% chance of catching the disease. What is the probability that out of six workmen four or more will contract the disease? 10 each
 b) The past experience suggests that 1.5% of the calls received at a telephone switchboard are wrong numbers. If 200 calls are received during each of randomly selected 50 weeks, find the expected number of weeks during which we expect x wrong number calls, where

$$x = 1, 2, 3, 4, \text{ and } 5$$

$$\text{Given } e^{-1.5} = 0.2231 \quad e^{-3} = .0498$$

8. a) In a year there are 956 births in town A, of which 52.5% were males. In 10 each towns A and B combined, this proportion was 0.496 in a total of 1406 births. Is there is any significant difference in the proportion of male births in two towns? (Use 1% level of significance).
- b) Five bolts drawn from the bolts manufactured by a certain machine have lengths 2.3, 2.28, 2.31, 2.33 and 2.28 c.ms. Find an unbiased estimate of the variance of the length of the bolts produced by the machine.

| TABLE SHOWING AREAS OF THE STANDARD NORMAL CURVE FOR VALUE OF 'X' BETWEEN '0' AND 'X' | | | |
|---|--------|-------|--------|
| X | Area | X | Area |
| 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.

Marks

- | | Marks |
|---|---------|
| 1. Write short notes on any four of the following:- | 5 each |
| a) Irrevocable Trust | |
| b) Multi-Employer Scheme | |
| c) Group Underwriting | |
| d) Experience Rating | |
| e) Need for pension | |
| 2. a) Examine the concept of Insurable Interest in Group Insurance Products. | 10 each |
| b) Discuss non contributory Group Insurance Schemes. | |
| 3. a) What is meant by Employees - Deposit Linked Insurance Scheme, 1976 (E. D. L. I.)? | 8 |
| State and explain it's terms, conditions and benefits? | |
| b) An enquiry is received from 'Ayush' Infotech Pvt. Ltd., a reputed I. T. Company employing 1500 employees with average age of 35 yrs. and monthly wage bill of Rs. 2.25 crores, for switching over to Group Insurance Scheme in lieu of Govt. E. D. L. I. Scheme. | 2 each |
| Prepare Draft Reply letter elaborating following points :- | |
| i) Sailable features of Group Insurance Scheme offered by your Company. | |
| ii) How it is better alternative? | |
| iii) It's advantages to Employer and Employees. | |
| iv) Additional benefits which can be offered. | |
| v) Data required. | |
| vi) Steps to be taken for introducing Scheme. | |

4. A Joint Stock Company in private Sector Employing about 5,000 employees, has secured its Gratuity Liability through a Gratuity Trust Fund managed by the Trustees. The Fund which was set up 15 years ago is of the order of Rs. 180 crores as at 31.3.08. You are required to play the role of a Group Schemes Manager and propose to the Company to switch over from the self managed Gratuity Fund to the alternative of insurance Company's Group Gratuity Scheme.
- a) Discuss the relative merits and demerits of the two alternatives. 8
 - b) Discuss the fiduciary responsibility of the Trustees in view of the New Investment Pattern W. E. F. 01.04.2009. 6
 - c) State the important steps to be taken to bring about the switch over. 6
5. a) Explain briefly why Actuarial Valuation of Defined Benefit Schemes are necessary. Whether the benefits are funded or not? 10 each
- b) It is observed that of late Defined Benefit Superannuation Schemes have lost its appeal from the point of view of the employer.- Why so?
6. State the Income Tax position from the point of view both the employer and employees in respect of the following, indicating the relevant section/s in the Income Tax Act, 1961. 5 each
- a) Ordinary annual contribution and initial contribution made by an employer to an Approved Gratuity Fund.
 - b) Ordinary annual contribution and initial contribution made by an employee to an Approved Gratuity Fund.
 - c) Normal contribution and the additional contribution of the employee and normal contribution of employer made to a Recognized Provident Fund
 - d) Premiums paid by the employee and the employer under a Contributory Group Insurance Scheme providing death benefits.
7. a) Whether an employer can fund his liability in respect of employees' leave encashment (lump sum) under a Group Insurance Scheme? If so bring out the details of the Scheme. 10 each
- b) Mention any one scheme under which the Govt. is providing insurance protection to rural and urban poor persons below poverty line and explain any one of them stating how the problems being faced in implementation of the Scheme are being tackled.

8. Write brief notes on **any four** of the following :-
- a) Aam Admi Bima Yojana.
 - b) Janshree Bima Yojana and Shiksha Sahyog Yojana.
 - c) Group Savings Linked Insurance Scheme.
 - d) Group Insurance in conjunction with superannuation Scheme.
 - e) Winding up of superannuation Fund.

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FELLOWSHIP EXAMINATION

REINSURANCE

Time: 3 Hours]

[Total Marks : 100

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

| | Marks |
|---|-----------------------|
| 1. a) Distinguish between Fire Quota Share Treaty and Surplus Treaty Reinsurances. | 12 |
| b) What are the advantages and disadvantages of each ? | 8 |
| 2. Write short notes on any five of the following :- | 4 each |
| i) Retrocessionnaire | |
| ii) Layering | |
| iii) Original conditions | |
| iv) P M L | |
| v) SYNDICATE | |
| vi) Uberrimae Fidei | |
| vii) Stop-Loss Reinsurance | |
| viii) Reinstatement | |
| 3. Calculate the profit commission payable on : | 20 |
| (i) annual basis (ii) three years average basis on following Fire Treaty result for 2009 | |
| | ₹ |
| Witten premium | - 1,00,00,000 |
| Portfolio Entry | - premium - 30,00,000 |
| | - Loss - 15,00,000 |
| Portfolio withdrawal | - premium - 35,00,000 |
| | - Loss - 17,50,000 |
| Commission | - 40% |
| Taxes | - 1% |
| Claims paid | - 20,00,000 |
| Cash loss Recovered | - 1,00,000 |
| Management Expenses | - 5% |
| Profit Commission | - 30% |
| Results : | |
| Loss for 2008 | - 15,00,000 |
| Profit for 2007 | - 17,00,000 |

4. Outline the procedure to be followed for Reinsurance arrangements as per IRDA (Life/General Insurances - Reinsurance) Regulations, 2000. 20
5.
 - a) What are the advantages of reinsurance, to an insurance Company? 10 each
 - b) Why is it important to place reinsurance with a well rated reinsurer? 10 each
6.
 - a) What are the objectives to be kept in mind while designing a re-insurance program? 10 each
 - b) What are the points to be considered while deciding whether or not placement of re-insurance program should be done using intermediaries? 10 each
7. Elaborate the reasons why an insurance company would write inward reinsurance business. 20
8. What are the reinsurance regulations as per I R D A's General Insurance (Reinsurance) Regulations, 2000? 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.

| | Marks |
|---|--------|
| 1. a) Define Safety Audit. | 5 |
| b) Describe how audit is conducted? | 15 |
| 2. Write short notes on :- | 5 each |
| a) Risk and Insurance Manuals | |
| b) Record keeping | |
| c) Review of risk management process | |
| d) Risk evaluation. | |
| 3. What are the various techniques employed in risk Perception and Identification Process? | 20 |
| 4. How does risk management contribute to achievement of corporate objectives? | 20 |
| 5. Explain, with examples, why risk management should be integrated with functional management. | 20 |
| 6. Why is insurance a preferred method of risk transfer? | 20 |
| 7. Elaborate the different ways of handling risk. | 20 |
| 8. Explain the elements of risk management process. | 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. Discuss in detail with examples the Agreements which are void under the Indian Contract Act. | 20 |
| 2. a) Define a Contract of Indemnity. Explain in detail the rights of an indemnity holder. | 12 |
| b) How does an insurance Contract differ from an Ordinary Contract? | 8 |
| 3. a) Enumerate the circumstances under which a contract of insurance is discharged. | 12 |
| b) What is a 'Cover Note'? How far the insurer is liable when a cover note is issued? | 8 |
| 4. a) What are the provisions of Section 64 VB of Insurance Act, 1938? | 10 each |
| b) How are the requirements of Section 64 VB are relaxed in following cases: | |
| i) Policies issued for a period of more than one year. | |
| ii) Marine covers other than Hulls. | |
| iii) Policies of reinsurance. | |
| <u>Section 'B'</u> | |
| 5. a) Define Economics. When does a firm attain equilibrium? What are the factors which affect the price of a commodity in the market? | 12 |
| b) What does income elasticity of demand indicate? | 8 |
| 6. Distinguish between Fixed Costs and Variable Costs. What are the factors which affect the demand for a particular commodity other than its price? | 20 |

7. a) Distinguish between Planned Economy and Market Economy.
b) Differentiate Monopoly and Perfect Competition.

10 each

8. Write short notes on **any four** :-

5 each

- a) Frustration of Contract
b) Perfect Competition.
c) Factors of production
d) Consideration in Insurance Contract.
e) Bailment.

-----END-----

OCTOBER, 2010

**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)

- | | Marks |
|---|---------|
| 1. A business is run for profit objective but has to follow ethics and fulfill its social responsibilities. Discuss the relevance of the statement. | 20 |
| 2. a) What are the functions and advantages of the distribution channel in marketing? | 10 each |
| b) State in brief, functions of various insurance intermediaries. | |
| 3. Write short notes (about 50 words) on the following : | 5 each |
| a) Strokes | |
| b) Merchandising | |
| c) Indian Rural Market | |
| d) Dissonance. | |
| 4. How a marketing strategy is prepared and what are the requirements for its success? | 20 |
| 5. Analyse the different stages of the buying process of a customer. | 20 |
| 6. In marketing what is a brand? How a brand helps in marketing? | 20 |
| 7. Distinguish between : | 5 each |
| a) MCE and CEE | |
| b) Delegation and Empowerment | |
| c) Intangibility and Inseparability | |
| d) Breadth and Depth in Product Range | |
| 8. a) Enumerate the characteristics of Rural Markets in India . | 10 each |
| b) What are the promotional media which can be utilised for rural markets? | |

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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.

| Particulars | Debit Rs. | Credit Rs. | Marks |
|--|--------------|----------------|-------|
| 1. From the following Trial Balance as on 31.3.2009, of Moonlight Life Insurance Co. Ltd., prepare the Revenue Account for the year and Balance Sheet as on that date. | | | 20 |
| | | (Rs. in Lakhs) | |
| Commission | 5 | | |
| Annuities | 12 | | |
| Advance Payment of Tax | 15 | | |
| Agent Balance | 10 | | |
| Building Dep. Account | | 12 | |
| Claims less Reinsurance Paid : | | | |
| By Death | 50 | | |
| By Maturity | 20 | | |
| Cash with Banks on Current A/c | 15 | | |
| Claims outstanding at the beginning of the year :- | | | |
| By Death | | 25 | |
| By Maturity | | 30 | |
| Contingency Reserve | | 5 | |
| Expenses of Management | 12 | | |
| Furniture & Office Equipments | 20 | | |
| House Property | 20 | | |
| Income Tax | 12 | | |
| Investments | 12 | | |
| Interest, Dividend & Rent | | 20 | |
| Loan on Mortgages | 10 | | |
| Loan on Policies | 10 | | |
| Life Assurance Fund at the beginning of the year | | 60 | |
| Printed Stationery | 15 | | |

| Particulars | (Rs. in Lakhs) | |
|---------------------------|----------------|---------------|
| | Debit Rs. | Credit Rs. |
| Sundry Debtors | 12 | |
| Sundry Deposits | 12 | |
| Share Capital | | 20 |
| Taxation Reserve | | 15 |
| Premium less Re-insurance | | 75 |
| | 262 | 262 |

Following are the adjustments to be made :

- a) Claims less reinsurance outstanding at the end of the year :
 - i) By Death 20 Lakhs
 - ii) By Maturity 30 Lakhs
- b) Expenses outstanding Rs. 5 Lakhs and prepaid Rs. 1 Lakh
- c) Premium outstanding Rs. 15 Lakhs and Commission there on Rs.1 Lakh
- d) Interest, Dividends and Rents outstanding (net) Rs.1 Lakh and Interest and Rents accruing (net) Rs.2 Lakhs.

OR

1. The following is the Trial Balance of Shree General Insurance Co. Ltd. as on 31.03.2009. You are required to prepare the related Revenue Accounts, Profit and loss Account, Profit and Loss Appropriation Account for the year ending 31st March 2009 and the Balance Sheet as on that date.

20

| Particulars | (Rs. in Lakhs) | |
|---|----------------|---------------|
| | Debit Rs. | Credit Rs. |
| Share Capital | | 20 |
| Balance of funds at the beginning of the year : | | |
| Fire Insurance | | 12 |
| Marine Insurance | | 10 |
| Miscellaneous Insurance | | 15 |
| General Reserve | | 10 |
| Claims Paid :- | | |
| Fire | 12 | |
| Marine | 20 | |
| Misc. | 25 | |

(Rs. in Lakhs)

| Particulars | Debit Rs. | Credit Rs. |
|---|--------------|---------------|
| Premium Less Insurance Ceded:- | | |
| Fire | | 200 |
| Marine | | 50 |
| Misc. | | 125 |
| Commission Paid :- | | |
| Fire | 12 | |
| Marine | 10 | |
| Misc. | 25 | |
| Expenses of Management : | | |
| Fire | 10 | |
| Marine | 5 | |
| Misc. | 18 | |
| Claims Outstanding (as on 01.04.2008) :- | | |
| Fire | | 15 |
| Marine | | 10 |
| Misc. | | 20 |
| Audit fees | 10 | |
| Investments | 175 | |
| Interest outstanding | 50 | |
| Amount due from Insurers | 20 | |
| Buildings | 10 | |
| Cash at Bank | 85 | |
| | 487 | 487 |

Other information :-

(Rs. in Lakhs)

| | | |
|--|--|-----|
| i) Claims outstanding as on (31.03.2009) :- | | |
| a) Fire | | 10 |
| b) Marine | | 8 |
| c) Misc. | | 15 |
| ii) Accrued Interest | | 10 |
| iii) Provide for unexpired risk reserve at 50% for Fire and Miscellaneous Insurance and at 100% in Marine Insurance. | | |
| iv) Market value of Investments | | 160 |
| v) Provide Tax liability | | 20 |

2. a) "Marginal Costing technique help management in decision making process". - Enumerate some of the applications. 6
- b) XYZ Ltd. produces and markets a single product , where competition is tough. The following information is available. 14

| | Per Unit Rs. |
|-----------------|-------------------------|
| Materials | 8.00 |
| Variable Cost | 6.00 |
| Dealer's Margin | 2.00 (10%) |
| Selling Price | 20.00 |

Fixed cost is Rs.2,50,000 which does not change unless full capacity is reached. With the present capacity utilisation of 75%, the company is able to sell 90000 units. To augment sales suggestions have been made.

- i) To reduce sale price by 5%
- ii) To increase dealer's margin by 25% over the existing rate.

You are required to recommend to the company as to the feasibility of the above two suggestions without affecting the present profit.

3. Describe briefly as regards valuation of following investments as per IRDA Regulations. 4 each
- a) Real Estate - Investment Property
 - b) Debt Securities
 - c) Equity and Derivative Instruments that are actively traded in Stock Exchange.
 - d) Unlisted Securities in the form of Equity and derivatives.
 - e) Loans.

4. Following are the summarised Balance Sheet of Z Ltd. as on 31st March 1998 and 1999. 20

| | 1998 Rs. | 1999 Rs. |
|---------------------------|---------------------|---------------------|
| <u>Liabilities</u> | | |
| Share Capital | 2,00,000 | 2,50,000 |
| General Reserve | 50,000 | 60,000 |
| Profit and Loss A/c | 30,500 | 30,600 |
| Bank Loan (Term Loan) | 70,000 | - |
| Sundry Creditors | 1,50,000 | 1,35,200 |
| Provision for taxation | 30,000 | 35,000 |
| | 5,30,500 | 5,10,800 |

| | 1998 Rs. | 1999 Rs. |
|-------------------|-----------------|-----------------|
| Assets | | |
| Land and Building | 2,00,000 | 1,90,000 |
| Machinery | 1,50,000 | 1,69,000 |
| Stock | 1,00,000 | 74,000 |
| Sundry Debtors | 80,000 | 64,200 |
| Cash | 500 | 800 |
| Bank | - | 7,800 |
| Goodwill | - | 5,000 |
| | <u>5,30,500</u> | <u>5,10,800</u> |

Additional Information :

During the year ended 31st March, 1999 :-

- i) Dividend of Rs. 23,000 was paid
- ii) Assets of another Company were purchased for a consideration of Rs.50,000 payable in shares. The following assets were purchased:
Stock - Rs.20,000 Machinery - Rs.25,000
- iii) Machinery was further purchased for Rs.8,000
- iv) Depreciation written off on machinery Rs.12,000 and
- v) Income Tax provided during the year Rs.33,000; loss on sale of machinery Rs.200 was written off to General Reserve.

You are required to make the Statement of Cash Flow.

5. From the following information, complete the Balance Sheet given below :- 20
- a) Total Debt to net worth 0.5 to 1
 - b) Turnover of Total Assets 2
 - c) Gross Profit 30%
 - d) Average Collection period (based on 360 days a year) 40 days
 - e) Inventory turnover 3 times
(bases on Cost of goods sold and year end inventory)
 - f) Acid Test Ratio 0.75 to 1

| BALANCE SHEET | | | |
|-------------------|----------|---------------------|----------|
| LIABILITIES | (Rs.) | ASSETS | (Rs.) |
| Common Stock | 2,00,000 | Plant & Equipments | ? |
| Retained earnings | 3,00,000 | Inventory | ? |
| Accounts Payable | ? | Accounts Receivable | ? |
| | _____ | Cash | ? |
| | <u>?</u> | | <u>?</u> |

6. a) What are the sources of funds inflow into the organisation and how does the organisation use the funds? 10 each
- b) You are required to calculate the break-even point in the following case. The Fixed Costs for the year are Rs.80,000; Variable Cost per unit for the single product being made is Rs.4. Estimated sales for the period are valued at Rs.2,00,000. The number of units involved coincides with the expected volume of output. Each unit sells at Rs.20/-
7. Write short notes on the following :- 4 each
- Responsibility Centre
 - Contingent Liability
 - Error affecting tallying of Trial Balance
 - Non-performing assets and its classification
 - Net lapse ratio.
8. a) What are the principles that are kept in mind while deciding Capital Expenditure? 5
- b) S Ltd. has an ambitious plan of increasing production and thereby sales. It has two options : 15
- To modernise the existing plant at a cost of Rs.60,000
 - To instal a new plant at a cost of Rs.70,000.
- By using Net Present Value Method, you are required to suggest the best out of the two options. Other details are as follows:

| Year | Yields | | Discount Factor |
|------|----------|----------|-----------------|
| | Option 1 | Option 2 | at 12% |
| 1 | 10,000 | 12,000 | 0.89 |
| 2 | 11,000 | 13,000 | 0.80 |
| 3 | 12,000 | 14,000 | 0.71 |
| 4 | 12,000 | 14,000 | 0.64 |
| 5 | 15,000 | 14,000 | 0.57 |
| 6 | 15,000 | 16,000 | 0.51 |
| 7 | 16,000 | 16,000 | 0.45 |
| 8 | 16,000 | 16,000 | 0.40 |
| 9 | 14,000 | 14,000 | 0.36 |
| 10 | 12,000 | 13,000 | 0.32 |

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

OCTOBER, 2010

FELLOWSHIP EXAMINATION HUMAN RESOURCES MANAGEMENT

Time: 3 Hours]

[Total Marks : 100

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

- | | Marks |
|---|--------------|
| <p>1. a) You are the H. R. Manager incharge of a very large insurance company. Do you think that managing Group Dynamics would play a huge role in your functions?</p> <p>b) You have recently not been granted a promotion and a junior has been promoted instead. What would be your course of action in your work in such a scenario?</p> | 10 each |
| <p>2. What would you infer from the following management terminologies?</p> <p>a) Wages by Point Method.</p> <p>b) Walk-in-Interview</p> <p>c) P E R T</p> <p>d) Dynamic Engagement.</p> | 5 each |
| <p>3. a) Describe the various types of leadership based on authority.</p> <p>b) Which of these types would you like to adopt as a leader?</p> <p>c) You are Incharge of the training department in your organisation. What are the different types of training that you would arrange for your employees over an annual period. Explain with reasons the type of training chosen.</p> | 6 4 10 |
| <p>4. Write short notes on :-</p> <p>a) Recruitment Consultants.</p> <p>b) Vroom's Expectancy Theory.</p> <p>c) Barriers to Communication.</p> <p>d) Japanese style of management.</p> | 5 each |
| <p>5. a) Read this news paper report.</p> <p>"Monkeys trained from birth to climb trees and pick coconuts have gone on strike on the coconut plantation near Kauntan, Malaysia, after</p> | 10 each |

their banana rations were reduced inadvertently. Some staged noisy demonstration outside estate office, while others sat around in silent protest. The few who tried to carry on working were quickly pulled to the ground by militant colleagues". Instead of monkeys this was workers in your Company. What would you do to end the strike?

- b) Recount a similar situation that may have happened in your Company or in any other Company you know of and how the situation was handled?
6. Distinguish between :- 5 each
- a) Consensus and Unanimity.
 - b) Internal and External Communication.
 - c) Maslow's and Herzberg's theories of Motivation.
 - d) Career and Management Development.
7. Write short notes on :- 5 each
- a) Ranking method
 - b) Factor Comparison method
 - c) Point method.
 - d) Classification method.
8. Analyse critically the following transactions :- 5 each
- a) Husband : Laxmi, where is my car key?
Wife : I do not know, you never keep it in one place.
 - b) Husband : Lata, where is my car key?
Wife : Go search for yourself.
Husband : Yes, I will.
 - c) Husband : Asma, where is my car key?
Wife : Have you checked your coat pocket?
 - d) Husband : Nancy, can you help me to find my car key?
Wife : I believe you left it in the car itself. Go, check it up.

-----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.

| | | Marks |
|----|---|---------|
| 1. | a) Explain in detail the two fundamental maxims of 'Natural Justice' which ensure that law is applied fairly. | 12 |
| | b) Does rules of natural justice apply to administrative orders? Examine the issue in the light of the decision of Supreme Court in A. K. Kraipak V/s. Union of India. | 8 |
| 2. | Define 'Industrial Dispute'. When does an 'Individual Dispute' becomes an 'Industrial Dispute? Could there be an Industrial Dispute after the industry is shut down? | 20 |
| 3. | a) What does Sec. 11-A of the I. D. Act refer to? Can any fresh evidence be adduced when the matter is referred to for adjudication under the above Section? Does it have retrospective effect? | 12 |
| | b) Explain in detail the conditions under which an employer can change conditions of service pending dispute before an Industrial Court. | 8 |
| 4. | Write short notes on any four :- | 5 each |
| | a) Suspension under I. D. Act. | |
| | b) National Tribunal | |
| | c) Writ of Prohibition | |
| | d) Amalgamation of Trade Unions | |
| | e) Rest Interval. | |
| 5. | a) Define wages as prescribed under Section 2(vi) of Payment of Wages Act.. | 10 each |
| | b) Describe the procedure for registration of Trade Union under the Trade Union Act, 1926. | |

6. a) What are the legal provisions for payment of undisbursed wages in case of deceased employee? 10 each
b) What is Writ of Mandamus? How it is implemented?
7. a) Define Retrenchment as stated U/s 2(00) of Industrial Dispute Act, 1947. 10 each
State exclusions applicable under the provisions.
b) What are the conditions precedent to retrenchment U/s 25 of I D Act, 1947.
8. Write short notes on **any four** :- 5 each
- a) Duties of a Conciliation Officer
 - b) Functioning of Court of Enquiry.
 - c) Illegal Strikes and Lockouts
 - d) Principles governing adjudication of disputes relating to Dismissal or Discharge.
 - e) Exclusions from 'wages' U/s 2(vi) of Payment of wages Act.

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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. The I.T. Department of an Insurance Company has been instrumental in contributing to its growth. With the changing face of technology and the requirements of additional I T resources, should an insurance organisation look at the possibility of outsourcing its various IT projects? Discuss. | 20 |
| 2. Write short notes on : | 5 each |
| a) Disaster Recovery Systems | |
| b) O L A P Cubes | |
| c) Graphical user Interfaces | |
| d) Structured Query Language | |
| 3. Write short notes on the following : | 5 each |
| i) LAN | |
| ii) Debugging | |
| iii) M S Access | |
| iv) Artificial Intelligence | |
| 4. a) Discuss about Algorithmic approach vis a vis Flow Chart? | 8 |
| b) Draw atleast four Flow Chart Symbols. | 4 |
| c) Draw a Flow Chart in respect of the following : | 8 |
| Company X Y Z decides to select personnel for outdoor Sales activities. The applicant should have scored atleast 50% in English and (also) atleast 50% in Mathematics. Only Plus Two qualification and marks are taken into account. The eligible candidates, as above, will be interviewed by the Manager and he will decide to Select or Reject the candidate. The candidates will be short listed after the interview and call letter will be sent. | |

5. Using Office Automation Software benefits an insurance Company. Elaborate this statement highlighting the features of word, Excel and powerpoint. 20
6. a) How is Data Mining different from Data Warehousing? 10 each
b) In what way can Customer Relationship Management (C R M) play a role in the agenda of insurance companies?
7. Elaborate about : 10 each
a) Computer Virus, Trojans and Worms and
b) The importance of System security in an Office.
8. a) What is an Expert System? Distinguish between Expert System and Conventional programs. 8
b) Outline the need for so many programming languages that exists today. 6
c) What are the types of R A M that are presently available? 6

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FELLOWSHIP EXAMINATION
ASSET MANAGEMENT

Time: 3 Hours]

[Total Marks : 100

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

- | | Marks |
|--|-------|
| 1. Share prices more often than not are governed by psychological factors than by economic considerations - Discuss. | 20 |
| 2. Details of returns expected under different economic conditions from two different stocks are as under. | 20 |

| | Economic Condition | | | |
|------------------|--------------------|------------|------------|-----------|
| | High Growth | Low Growth | Stagnation | Recession |
| Probability | 0.2 | 0.3 | 0.3 | 0.2 |
| Return on Stock: | | | | |
| A | 100 | 120 | 130 | 140 |
| B | 120 | 150 | 100 | 80 |

You are requested to calculate the expected return and advise the investor the best option if he has Rs. 1,000/- to invest and both stocks are available at Rs. 100/- per share.

- | | |
|--|---------|
| 3. a) What do you understand by the term "Futures"? | 10 each |
| b) Explain how it is used as a hedging tool. | |
| 4. "Systematic Risk cannot be controlled but unsystematic risk can be reduced" - Discuss. | 20 |
| 5. "Convertible bonds offer a secured form of investment without sacrificing the yield." Highlight the features of a convertible bond with special reference to their valuation. | 20 |

6. a) .What is beta? What does a beta coefficient measure? 10 each
b) Assume a security with a beta of 1.5 is being considered at a time when the risk free rate is 8% and the market return is expected to be 12%. Calculate the minimum return required as compensation for the non-diversifiable risk.
7. "The objective of Asset Management will depend on the nature of the industry" 20
- Discuss with reference to an insurance Company.
8. Write short notes on **any four** :- 5 each
a) IAIS
b) NAV
c) FEMA
d) Repos
e) O C Bs

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