## Faculty of Commerce and Management

## Final Year Repeat Examination in Business Administration/Commercef

(Specialization in Enterprise Development) - 2008/2009(Feb'2010)
MGT 4144 - Financial Management

## Answer All Questions

Time Allowed: 03 Hours

## Non Programmable Calculators are permitted. Use tables attached.

1. The comparative financial statements of AMC plc for financial year ending $31^{\text {st }}$ December 2009 are given below:

Balance sheet as at $31^{\text {st }}$ of December 2009

| Liabilities | Rs. |
| :--- | ---: |
| Equity and Liabilities |  |
| Share Capital and Reserves | 200,000 |
| $10 \%$ Long term Mortgage Loan | 100,000 |
| Short term Loans from bank | 50,000 |
| Creditors | 50,000 |
|  | 400,000 |
| Assets |  |
| Land and Buildings, Furniture etc.(net) | 200,000 |
| Stocks | 120,000 |
| Debtors | 50,000 |
| Cash \& Bank | 30,000 |
|  | 400,000 |

The Income Statement for the year ended $31^{\text {st }}$ of December 2009

|  | Rs. |
| :--- | ---: |
| Sales | 500,000 |
| Cost of sales | 300,000 |
| Gross profit | 200,000 |
| Operating expenses | 110,000 |
| Profit before interest and taxes | 90,000 |
| Interest on long-term loan | 10,000 |
| Profit before tax | 80,000 |
| Taxes | 30,000 |
| Profit after tax | 50,000 |

## Required:

Comment on the financial performance of the company for the year ending $31^{\text {st }}$ of December 2009 using relevant financial ratios.
02. (a) Find the present value of Rs. 10,000 receivable after 5 years if the rate of discount is $10 \%$
(b) A finance company advertises that it will pay $10 \%$ interest annually for a 5 year fixed dep if Rs. 100,000 is deposited now. Find the value of the deposit at the end of $5^{\text {th }}$ year.
(c) A Rs. 1000 par value bond bearing a coupon rate of $12 \%$ will mature after 5 years. Wha the value of the bond today, if the discount rate is $15 \%$ ?
(25 Mar
03. The following data are extracted from the financial statements of a company:

| Sales (100,000 units @ Rs.10) | $10,00,000$ |
| :--- | ---: |
| Variable Costs | $5,00,000$ |
| Contribution | $5,00,000$ |
| Fixed Cost | $3,00,000$ |
| Net Profit | $2,00,000$ |

## Required:

(a) Calculate the following:
(i) $\mathrm{P} / \mathrm{V}$ ratio
(ii) Break Even Point
(iii) Margin of safety
(b) If the price increases by 20 percent, what shall be the new PN ratio and Break Ell Point?
(c) If the price increase by 20 percent is accompanied by a reduction in volume by percent, what shall be the effect on the Break Even Point and Profit?

A firm is considering two mutually exclusive investments, Project $A$ and Project $B$. The expected cash flows of these projects are as follows:

| year | Cash flows (Rs.000) |  |
| :---: | :---: | :---: |
|  | Project A | Project B |
| 0 | $(1000)$ | $(1000)$ |
| 1 | 300 | 1000 |
| 2 | 400 | 500 |
| 3 | 900 | 100 |

Cost of capital is $10 \%$

## Required:

(i) Calculate the NPV for each of the projects.
(ii) What is the IRR of each project?
(iii) Which project would you choose?

Table A－1 Future Value Interast Factors for One Doilar Compounded at $k$ Porcent for $n$ Perlods：$F V / F_{k B}=(1+k)^{n}$

| Period | 1\％ | 245 | S\％${ }^{\text {\％}}$ | Whay | 3）${ }^{4}$ | $6{ }^{\text {d }}$ |  |  | 0\％ | cask |  | 12. | 13\％： | 16\％ | 915\％ | 8\％ | 20se | 20\％ | 20\％ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \％exat | 1.0100 | 1.0200 | 1.0300 | 1.0400 | 1.0800 | 1.0800 | 1.0700 | 1.0800 | 1.0900 | 1.1000 | 1.1100 | 1.1200 | 1.12300 | 1．1400 | 1.1500 | 1．1500 | 1.2000 | 1.2400 | 1．2800 |
| \％ | 1.0201 | 1，0404 | 1.0800 | 1．0315 | 1．1025 | 1.1238 | 1.1449 | 1，1064 | 1．1809 | 1.3100 | 1.2321 | 1.2544 | 1.2769 | 1．2995 | 1.3225 | 1，2458 | 1.4400 | 1.5376 | 1．6625 |
| 4 | 1.0303 | 1.0642 | 1.0027 | 1.1249 | 1.1876 | 1，1890 | 4．2250 | 1.2559 | 1.2050 | 1.3310 | 1.3678 | 1．4048 | 1．4．429 | 1，4818 | 1．5209 | 1．5609 | 1.7280 | 1.9068 | 1．9531 |
| 5 | $\frac{1.0405}{1.0519}$ | 1．0324 | 1．1285 | $1.15{ }^{5} 5$ | 1．2155 | 1.2825 | 1.3109 | 1.3505 | 1，4118 | 1，404 | 1．8131 | 1.6738 | 1．8305 | 1．8580 | 1.7400 | 1．8109 | 20730 | 2.3042 | 24414 |
| 290 | 1.0519 | 1.1041 | 1．1503 | 1.2187 | 1．2763 | 1.2382 | 1．4823 | 1.4303 | 1.8359 | 1． 51505 | 1.8551 | 1.7823 | 1．8424 | 1.5234 | 2.0144 | 2.1003 | 2.4883 | 2,9318 | 3.0818 |
| 6 | 1.0815 | 8.1282 | 1．1341 | 1．2853 | 1．3401 | 1，4135 | 1.8007 | 4．8889 | 1.4771 | 1．7743 | 1.8708 | 1.8738 | 2.0920 | 2.1950 | 2.3131 | 2．4304 | 29858 | 3.83362 | 3.8147 |
| \％ 7 | 9.0721 | 1.1857 | 1，22：9 | 1.3189 | 1．4071 | 1．8035 | 1．8068 | 1.7138 | 1．2200 | 1.84407 | 20762 | 2．a107 | 2．3528 | 2.5029 | 2．6500 | 2.8292 | 3.5832 | 4.6077 | 4，7604 |
| － | 1．0829 | 1.1797 | 1.2668 | 1.3888 | 1．4778 | 1．6935 | 1.7182 | 1.3509 | 4．8928 | 2.1485 | 2．3048 | 2.4760 | 2.8594 | 2.8828 | 3.0880 | 3．2786 | 4．2988 | 6.6895 | 6．9805 |
| － 98 | 1.0937 | 1．2081 | 1.3048 | 1.4239 | 1.5613 | 1.6095 | t．83s | 1.9980 | 2.1710 | 2.3879 | 2．5350 | 2.7734 | 3.0040 | 3.2519 | 3.8179 | 3．8830 | $5.150{ }^{\text {c }}$ | 6．9310 | 7.4508 |
| － |  |  |  | 1.4 | 1.6239 | 1．7808 | 1.9 | 2.1859 | 2．3074 | 2.61937 | 2.8384 | 3.1089 | 3，3846 | 3.7072 | 4．0468 | 4.4114 | 6.18817 | 0.5944 | 8，3432 |
| \％ $11 \%$ | 1.1157 | 8.2434 | 1.3842 | 9．83995 | 1.7103 | 1．8603 | 2.1049 | 2.3316 | 2.5604 | 2.8634 | 3．7618 | 3.4785 | 3．8339 | 4.3282 | 4．303 | 8.1173 | 7，4301 | 10.005 | 11．942 |
| 14 | 1.1288 | 1.2832 | 1．4259 | 1.6010 | 1.7959 | 2.0122 | 2.3522 | 2.6162 | 2.8127 | 3.1384 | 3，4885 | 3．asma | 4.3345 | 4.8176 | 6，20503 | 6.8580 | 8，9161 | 13.215 | 14.562 |
|  | 1．1351 | f．2938 | 14．305 | 1．6651 | 1，4836 | 2.1328 | 2.4098 | 2.7188 | 3.0888 | 3，4523 | 3．4as3 | 4，3835 | 4.0850 | 6.4324 | 6.1828 | 6．8565 | 10．699 | 10．338 | 18.480 |
| － 30 | $\frac{1,1685}{1.1610}$ | 1．8469 | $\frac{1.5128}{1.5580}$ | 317 | 1.9790 | 2.2600 | 2.6785 | 2.8372 | 3.3647 | 3．7975 | 4.3104 | 4．8877 | 5． 5349 | 6.2813 | 7.0767 | 7，9078 | 12．439 | 20.311 | 22.737 |
| 4－3．0 |  | 1.8400 |  |  |  |  |  | 3.1722 | 3.6425 | 4.4772 | 4.7846 | ［．／4738 | 6．2343 | 7.1379 | 8．1371 | 0．2．358 | 15．407 | 28.108 | 28.422 |
| 15： | 1.1725 | 1，3723 | 1，5097 | 8.8730 | 2.1829 | 20404 | 2.9523 | 3，A259 | 3.8793 | 4.0950 | 8．3109 | 5，4304 | 7．0073 | 8.4972 | 0.35876 | 10.748 | 18.45 a | 31.243 | 35，827 |
| 17 | 1.1843 | 1，4002 | 1．0528 | 5．0470 | 2.29820 | 2.8983 | 3.1688 | 3.7000 | 4．3378 | 6．0845 | 8．9351 | 6，3099 | 7.1035 | 0.2765 | 10.781 | 2，465 | 22．188 | 8.741 | 44．400 |
| 18 | 1，1901 | 1.4232 | 1.7024 | 2.0258 | 2．4508 | 28853 | 3.3798 | 3，8090 | 4.7471 | 6．5609 | 0.8638 | 7.8500 | 2.0243 | 10.575 | 12.376 | 14．403 | 23.623 | 48．039 | 86.811 |
|  | $\frac{1.2001}{1.2208}$ | 1，4tse | 1.7838 | $2.10{ }^{2}$ | 2.8870 | 3.0255 | 3．6185 | 4.3187 | 6.9417 | 0.1162 | 7.2833 | 8．6123 | 10．107 | 12.086 | 14．232 | 18.7 | 31．045 | 59.558 | 80．389 |
| उतtat |  |  |  |  |  | 3.2071 | 3.8697 | 4.8810 | ． 6094 | 6．7275 | 23 | 9.6453 | 11.523 | 13.743 | 16，367 | 19．451 | 38．238 | 73.864 | 86.736 |
| 120 | 1.2324 | 1.5167 | 1．8693 | 2278 | 2.7830 | 3.3095 | 4．1446 | 8.0338 | 6.1088 | 7.4002 | 6．8492 | 10.804 | 13，021 | 48．668 | 10.422 | 22，574 | 46，005 | 91.692 | 103．420 |
| 4 | 1.2447 | 1，6400 | $1.916 \pm$ | 2.3639 | 2.02853 | 2.0038 | 4．4304 | B．4305 | 0.8608 | 3．140s | 2．8358 | 12.100 | 14.714 | 17．061 | 21.045 | 28，186 | 55.205 | 113.574 | 135.525 |
| 4 | 1.2572 | 1．57 | 1.9736 | 2.4887 | 3.0778 | 3.8197 | 4.74005 | 6.8718 | 7.2879 | 8.0543 | 11.028 | 13．552 | 16.827 | 20，302 | 24．a\＄1 | 31.378 | 86．247 | 140.831 | 169.407 |
| \％ | 1.2697 | 1.8085 | 2.0329 | 2.5538 | \＄ 22251 | 4，0405 | 8.0724 | 6． 3412 | 7.0111 | S．8457 | 12.238 | 18．179 | 18．758 | 23.212 | 28.625 | 35.239 | 72，497 | 174．631 | 279.756 |
| d | 1.2326 |  | 2.0938 | 2．8588 | 3．3564 | 4.2999 | S．4274 | 6.8485 | 8． 6293 | 10，838 | 13.585 | 17.000 | 21.251 | 25．482 | 32.010 | 40.874 | 95．394 | 216.542 | 294．809 |
| 040 | 1.3478 | 1.5114 | 24273 | 3.2434 | 4.3219 | 3.7438 | 7.8123 | 10.063 | 13．208 | 17．440 | 22.092 | 23．380 | 39.116 | 60.950 | 60．312 | 25．950 | 237.376 | 634．820 | 207．784 |
| St | 1．4188 | 1.9899 | 28139 | 3.8451 | 6.5180 | 7.8884 | 10．677 | 14．785 | 20.414 | 28.102 | 38.675 | 52．800 | 72．059 | 88.100 | 183， 178 | 180.314 | 350．66B | ＊ | ． |
| 3 | 1．430 | 2.0399 | 2.8093 | 4.1030 | 6．7098 | 0.1478 | \＄1．428 | 15．804 | 22.231 | 30.813 | 42.818 | －0． 138. | 日t．a3y | 111．834 | 163.158 | 209.104 | 708.802 | ＊ | ． |
| $\frac{40}{385}$ | ${ }_{\text {1．}}^{1.84489}$ | $\frac{2.2080}{2.5014}$ | $\frac{3.2620}{4.3838}$ | 4．8030 | 7，0400 | $\frac{10.288}{18.420}$ | 14.974 | 21．725 | 31．408 | 46.259 | 65，001 | 83.051 | 132.782 | 188.884 | 267．884 | 378.721 | － | － | ＊ |
|  |  |  |  |  |  |  | 28.407 | 46.802 | 74．353 | 117.391 | 144．50\％ | 235．002 | 460.738 | 700.233 | ， | ＊ | ＊ | ． | ＊ |

Table A－2 Future Valus interest Factors for a One－Dollar Annuity Compouned at $k$ Percent for $n$ Perioda：FyIFA $k, n=\left[(1+k)^{n}-1\right] / k$

| Pariod | 4\％ | $2{ }^{2}$ | 3\％ | 6\％ | 6\％ | 3\％ | \％ 6 \％ | 2\％\％ | 24\％ | 104 | 412\％ | 12\％ |  | 6－10， | 敒\％ | Shedic | 20\％ | $24 \times$ | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| － | 1．5000 | 1.0200 | 1．9300 | 1．0000 | 1．0800 | 1.0500 | 1.0709 | 1.0500 | 1.0990 | 1.1009 | 1.1100 | 1.1200 | 1.1300 | 1.1400 | 1.1500 | 1.1600 | 1.2000 | 1.2400 | 1.2600 |
| 2 | 2.0100 | 2.0209 | 2.0300 | 2.0400 | 2.0890 | 2.0800 | 2.0700 | 2.0800 | 2.0509 | 2.1000 | 21100 | 2，1200 | 2.1300 | 21000 | 2.1800 | 2.1800 | 2.2000 | 2.2400 | 2.2560 |
| 4 | 3.0301 | 3．0699 | 3，0909 | 3.1216 | 3.11826 | 3.1838 | 3.2149 | 32404 | 3.2751 | 3，3100 | 3.3421 | 3.3744 | 3，4069 | 3．4539 | 3.4725 | 3.5058 | 3.6400 | 3.7776 | 3.1128 |
| \％ | 4.0804 | 4，1218 | 4.1836. | 4.2488 | 4.3109 | 4．374s | 4．4389 | 4.5091 | 4．8739 | 4．8410 | 4.7097 | 4，7793 | 4．8060 | 4．2211 | 4.9934 | 8．0566 | 8.3680 | 5.6842 | 6．7058 |
| 812 | 5.1010 | 5.2040 | 6．3091 | 5．4483 | 8．625s | 6.8371 | 8，7607 | 5．5005 | 5，9047 | 0.4081 | 6.2278 | 6．3529 | 0.4803 | 5． 6101 | 6.7424 | L．8771 | 7.4816 | 8.0418 | 1.2070 |
| 1. | 6.1820 | 8.3051 | 6，4034 | 5．a330 | 6.8019 | 0.8763 | 7．1839 | 7.3369 | 7.8233 | 7.7186 | 7.1829 | 0.1162 | 1.3227 | 2．8355 | 8.7637 | 8.9778 | 9．9209 | 10.980 | 11.25 ¢ |
| 4 | 7.2138 | 7．4343 | 7．8585 | 7.8993 | 2．1420 | 0.3838 | 8.8540 | 8． 2223 | 8．2004 | 2.4572 | 2.7433 | 10.088 | 16．405 | 10.730 | 11.087 | 11.414 | 12.916 | 14．015 | 15.073 |
| 4 | 8.2057 | 3.6839 | 0.8983 | 0.2142 | 9.6481 | 9．897\％ | 10.280 | 10.087 | 11．023 | 11．438 | 11．85s | 12.300 | 12.757 | 13．333 | 13.727 | 14.260 | 16．459 | 19.123 | 18.342 |
| ¢ | 2．3685 | 0.7646 | 10.489 | 10.863 | 11.027 | 11．481 | 11.578 | 12.489 | 13.021 | 13.679 | 14．164 | 14.776 | 15.416 | 18．885 | 10.788 | 17．618 | 20.788 | 24.712 | 26.802 |
| 浐 | 10.482 | 10．950 | 11．464 | 12．00\％ | 12．67a | 13．281 | 13.318 | 14．487 | 18.123 | 15．937 | 13.722 | 17．340 | 13.420 | 10.337 | 20，304 | 21，321 | 28．059 | 31.043 | 33.253 |
| － |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 18 | 14．587 | 12.189 | 12.808 | 13.485 | 14．207 | 14.972 | 45．784 | 18．945 | 17．850 | 10.531 | 10．501 | 20.885 | 21.814 | 3.045 | 24．348 | 23.733 | 32.150 | 20．238 | 42.689 |
| 12 | 12.633 | 13.412 | 14.192 | 15.029 | 18.547 | 16.370 | 17．388 | 18.977 | 20.148 | 21.384 | 22.713 | 24，933 | 26.850 | 27，271 | 21，002 | 30.850 | 39.501 | 60.396 | 84，208 |
| 40 | 13.3008 | 14.858 | 18.548 | 18，027 | 17.713 | 18.882 | 20．141 | 29．488 | 22.053 | 24．5n3 | 21.212 | 26．028 | 20.985 | 32．085 | 3M．352 | 36.78 Ea | 48.497 | 64.110 | 68.780 |
| － | 14.947 | 16.974 | 17，089 | 18.232 | 12．658 | 21.418 | 22．1550 | 24．218 | 28.019 | 27.975 | 30.0 嗉 | 32.383 | 34.883 | 37．681 | 40.885 | 43.672 | 58.100 | 80.498 | 83．049 |
|  | 16.087 | 17.293 | 18.550 | 20.024 | 21．870 | 23.270 | 25.129 | 27．162 | 29.351 | 31.772 | 34.403 | 37．280 | 40.417 | 43.442 | 47.880 | 01．830 | ${ }^{72.035}$ | 100．815 | 108．507 |
| 3－2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 510 | 17．243 | 18．839 | 20.157 | 21．a35 | 23.585 | 28.573 | 27．838 | 30.324 | 33．003 | 5.850 | 190 | 42763 | 45，672． | 80，930 | E5．717 | 60．028 | 07．442 | 126．014 | 138．169 |
| － | 18，430 | 20.412 | 21.762 | 23．698 | 26.840 | 28.213 | 30.840 | 33.750 | 38.974 | 40.648 | 44.608 | 488．8． 4 | 83.739 | 50，118 | 85.075 | 71.575 | 308． 031 | 167， 263 | 173.638 |
| 10 | 19．815 | 21.412 | 23.414 | 25.845 | 25.1332 | 33.800 | 33.899 | 37．A50 | 41，301 | 45.605 | 30．398 | 86．730 | 64.728 | 88，394 | 78．035 | 84．141 | 128.117 | 195．985 | 218.045 |
| 240 | 20.811 | 22.84 | 25，117 | 27.671 | 30.639 | 38.780 | 37，379 | 41．446 | 48.019 | 81．188 | 66，938 | 63．440 | 70.746 | 78.908 | 88.212 | 96．603 | 188，740 | 244，033 | 273.555 |
| 迹 | 22.012 | 24.297 | 25．970 | 29.778 | 33.088 | Ss | 988 | 782 | 61.160 | 67， 274 | 64.203 | 72．062 | 80．847 | 81.025 | 102.444 | 115．330 | 180．688 | s03．601 | 342．348 |
| 4 | 23，238 | 28.783 | 28.575 | 34．015 | 33.710 | 38.8098 | 44．88S | 60，423 | 68．785 | 64，002 | 72.298 | 81．638 | 92．470 | 104．768 | 188．610 | 134.841 | 225．020 | 377，465 | 420.651 |
| 25 | 20，472 | 27.200 | 30.657 | 34.248 | 38.508 | 43.982 | 48.000 | 56， 437 | 62.473 | 71，403 | 01.216 | 92．503 | 105．401 | 120．436 | 137．658 | 157.415 | 271.031 | 459，058 | \＄38． 101 |
| 4 | 28.718 | 23.046 | 92，458 | 38．548 | 41．430 | 40.810 | 63，430 | 60．993 | 82.032 | 78．343 | 91．148 | 104．003 | 129.205 | 1338.2087 | 109.278 | 183．801 | 328.237 | 502．630 | 673，828 |
| －81 | 28，873 | 30，422 | 24，426 | 39.083 | 44.502 | 60．810 | 88.177 | $6{ }^{6} .785$ | 78.780 | 88，497 | 102.174 | 111．158． | 138．031 | 159．859 | 188，108 | 813.078 | 392.454 | 723.461 | 645，033 |
| $2$ | 28．243． | 32.030 | 36， 160 | 48.040 | 47.727 | 68 | 63．249 | 73．105 | B4．701 | DE． 347 | 114.493 | 133．234 | 155．820 | 181.871 | 212.793 | 269.214 | 471.981 | 806．092 | ． |
| M | 34.788 | 40．6朗 | 47.576 | 86．005 | 86.430 | 79．050 ${ }^{\text {a }}$ | 95．481 | 113．283 | 138．903 | 104．698 | 102．031 | 244，333 | 293.120 | 36.737 | 434.705 | 830，312 | － | ＊ | ＊ |
| 28. | 41.680 | 49．094 | 80，482 | 73.882 | 20，330 | 111．435 | 138.237 | 172.317 | 215．711 | 271.084 | 341.580 | 431.803 | 646．551 | 69.673 | 3 31． 170 | － | － | ＊ | ＊ |
| W10 | 43.077 | 51.888 | 83，278 | 77．588 | 98．838 | 112.121 | 148.913 | 187， 192 | 236.125 | 280.127 | 388.184 | 485．403 | ＊18．750 | 791.673 | ． | ＊ | － | ＊ | － |
| 60． | 48，885 | 80.402 | 75．401 | 95．025 | 129.800 | 164．762 | 189.635 | 259．087 | 357．802 | 442.683 | E81，．a29 | 767.091 | － | ． | ． | a | － | ． | － |
| suo． | 51.453 | 84.679 | 112.787 | 162.857 | 209.388 | 230，335 | 400.629 | 573．770 | 815,096 | ＊ | ． | － | － | － | ． |  |  |  | － |

Table A－3 Present Valus Interest Factors for One Dollar Discounted at $k$ Percent for $n$ Periods：PViF $k, n=1 /(1+k)^{n}$

| Periout， | $14{ }^{2}$ | 23\％ | W\％ | $4 \%$ | 8580 | S． $\mathrm{H}_{4}$ | 5\％ex | 34． |  |  |  |  |  | 14.4 |  | $45 \%$ ． | 20\％ | 32\％ | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0.9909 | 0.8808 | 0.9708 | 0.9815 | 0.9524 | 0.9434 | 0．9268 | 0.9259 | 0.9174 | 0,0091 | 0.9009 | 0.8329 | Q．teso | 0.9772 | 0.8005 | 0.8581 | 0.10333 | 0.8065 | a |
| －${ }^{2}$ | 0.9593 | 0.9812 | 0.8928 | 0．52258 | 0.9970 | 0.3900 | 0.8734 | 0.8673 | 0.18417 | 0.8234 | 0.1718 | 0.7072 | 0.7831 | 0.7005 | 0.7505 | 0.7432 | 0.6948 | 0.0504 | W |
| 3 | 0．970\％ | 0.9423 | 0.9159 | 0.8380 | 0．8638 | 0.8398 | 0.8163 | 0.7838 | 0.7722 | 0.7818 | 0.7312 | 0.7118 | 0.8839 | 0.6750 | 0．6575 | 0.4407 | 0，8797 | 0.5240 | enil |
| ＋ 4 | 0.8810 | 0.9238 | 0．8885 | 0.8648 | 0.8227 | 0.7921 | 0.7629 | 0.7358 | 0.7004 | 0．6a3s | 0.6867 | 0.8358 | 0.6135 | 0.5024 | 0.679 | 0.5623 | 0．4223 | 0.4230 | 0.2 |
| － 5 | 0.8518 | 0.8087 | 0．8026 | 0.0210 | 0.7835 | 0.7473 | 0.7130 | 0.6808 | 0.6459 | 0.0209 | 0.5055 | 0.5674 | 0.8420 | 0.5184 | 0.4072 | 0．4769 | 0．401过 | 0.3414. | 05 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| － a $^{3}$ | 0.5420 | 0.3880 | Q． 3378 | 0.7903 | 0.7462 | 0.7080 | 0．56e3 | 0.8302 | 0.5083 | 0.5845 | 0.5348 | 0.0008 | 0.4403 | 0.4068 | 0.4383 | 0．4108 | 0．3349 | 0.2759 | 2010 |
|  | 0，9337 | 0.8708 | 0.8131 | 0.7898 | 0.7107 | 0.8581 | 0.5227 | 0.8135 | 0.0470 | 0.5132 | 0.4817 | 0．45动 | 0.4251 | 0.3980 | 0.3769 | 0.3538 | 0.2781 | 0.2218 | Q 0 |
| \％． | 0．9235 | 0.21335 | 0.7834 | 0.7307 | 0．6788 | 0.4274 | 0.5820 | 0.8503 | 0.5019 | 0．45085 | 0.4339 | 0.4039 | 0.3789 | 0.3600 | 0.3205 | 0.3050 | 0.2328 | 0.1789 | 0.15 |
| ${ }^{2}$ ， | 0.9148 | 0.0388 | 0.7664 | 0.7828 | 0.6448 | 0.85918 | 0.8439 | 0.5002 | 0.4104 | 0.4251 | 0.3909 | 0.3605 | 0.3328 | 0.3078 | 0.2843 | 0.2630 | 0.1938 | 0.1443 | 0.11 |
| 10 | 0.9053 | 0.0203 | 0.7444 | 0.3768 | 0.6139 | O．g5es | 0.6993 | 0.4632 | 0，4224 | 0.3885 | 0.3622 | 0.3220 | 0．2909 | 0.2889 | 0.2472 | 0.2337 | 0.1695 | 0.1104 | Q15 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 14 | 0.8903 | 0.8048 | 0.7234 | 0.6493 | 0.8047 | 0.5288 | 0.4781 | 0．423\％ | 0，3075 | 0.38308 | 0.3173 | 0.2878 | 0.2607 | 0.2380 | 0.2109 | 0.1954 | 0，1348 | 0.0838 | 1．M． |
| 42 | 0．8374 | 0.7888 | 0.7014 | 0.8248 | 0.85889 | 0.4970 | 0.4440 | 0．3071 | 0.3588 | 0.3186 | 0.3858 | 0．2307 | 0.2367 | 0.2076 | $0.418{ }^{\text {a }}$ | 0.1886 | 0，1122 | 0．9787 | 195 |
| 36 | 0.8797 | 0.7730 | 0.6810 | 0.6005 | 0.5303 | 0．4Aes | 0.4160 | 0.3577 | 0.3293 | 0.2097 | 0.2576 | 0.2982 | 0.2949 | 0.1829 | 0.7829 | 0.4452 | 0.0836 | 0.0510 | 005 |
| 14. | 0.8700 | 0.7679 | 0.8841 | 0.8776 | 0.8054 | 0．4428 | 0.35878 | 0.3400 | 0.2982 | 0.2853 | 0.2320 | 0.2004 | 0.1807 | 0.1597 | 0.1013 | 0.1233 | 0.0779 | 0.0402 | 20N |
| 1e． | 0.8513 | 0.7430 | 0.8518 | 0．5653 | 6．4810 | 0.4173 | 0，3626 | 0.3152 | 0.2748 | 0.2394 | 0．2050 | 0.1827 | 0.1500 | 0，1401 | 0.1239 | 0.1079 | 0.0549 | 0．0397 | 018 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| （4）48 | 0．8523 | 0.7234 | 0.5238 | 0.8338 | 0.4881 | 0.3996 | 0.3337 | 0.2912 | 591 | 0.2175 | 0.1803 | 0.1831 | 0.14815 | 0.1229 | 0.1089 | 0.0930 | 0.0841 | 0.0320 | O．N14 |
| \％ 17 | 0.8444 | 0.7942 | 0.8050 | 0.3138 | 0.4303 | 0.3714 | 0.3105 | 0.2703 | 0． 3391 | 0.1976 | 0，4098 | 0.1468 | 0.1252 | 0．1078 | Q．0123 | ． 1082 | 0.0081 | 0．0283 | M11 |
| \％ | 0，8380 | 0.7002 | 0.6874 | 0.4935 | 0.4188 | 0.35893 | 0.285 | 0.2502 | 0.8129 | 0.4788 | 0.1529 | 0.1500 | 0.1185 | 0.0840 | 0.08508 | 0.0654 | 0.0376 | 0.0205 | ONiI |
| ， | 0.8377 | 0.8894 | 0.5703 | 0.4745 | 0.3957 | 0，2305 | 0．2768 | 0.2317 | 0.1945 | 0.1138 | 0.1577 | 1181 | 0.0831 | 0.0429 | 0.0705 | 0.0809 | 0.0313 | 0.0188 | av |
| 29. | 0．8195 | 0.0730 | 0．6637 | 0．A5BA | 0.3768 | 0.3110 | 0.2504 | 0.2148 | 0.1784 | 0.148 | 0.1240 | 0.1037 | 0.8884 | 0.0728 | 0.0811 | 0.0814 | 0.0261 | 0.0135 | 0.812 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2\％， | 0．3114 | 0，6598 | 0.5375 | 0.5388 | 0.35 就 | 0.2043 | 0.2415 | 8.1807 | 0，3037 | 0.9389 | 0.1417 | 0．0923 | 0.9738 | 0.0638 | 0．0033 | ． 0443 | ． 0247 | 0.0100 | W |
| 32 | 0.8034 | c．0458 | 0.8251 | 0，4220 | 0.5518 | 0.2776 | 0.2357 | 0.1830 | 0.1802 | 0.122 a | 0.6807 | c．0335 | 0.0580 | 0.0850 | 0.0688 | 0.0392 | 0.0151 | 0，0035 | am |
| 23 | 0.7984 | 0.3342 | 0．8067 | 0，4057 | 0.3258 | 0.2818 | 0.2109 | 0.1703 | 0.1378 | 0.1117 | 0.0907 | 0.0738 | 0.0601 | 0.0491 | 0.0402 | 0.0323 | 0.0151 | 0.0071 | a．w |
| 24 | 0，7a78 | 0.6217 | 0.4519 | 0.3904 | 0.3109 | 0.2470 | 0.1971 | 0.1877 | 0.1236 | 0.1015 | 0.0817 | 0．085 | 0.0833 | 0.0431 | 0.0349 | 0.0294 | 0.0128 | 0.0087 | Q M |
| 慈3 | 0．7798 | 0．5015 | 0，4776 | 0.3781 | 0.8383 | 0.2350 | 0.1842 | 0.1400 | 0.1100 | 0.0923 | 0．0735 | 0.059 | 0.8471 | 0.037 a | 0．0398 | 0.0248 | 0.0105 | 0.0045 | 0 0， |
| $\bigcirc$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 30. | 0.7619 | 0.8589 | 0.6120 | 0.3083 | 0.2314 | 0.1749 | 0.1314 | 0.0098 | 0.0784 | 0.0873 | 0.0487 | 0.0334 | 0.0258 | 0.0198 | 0.9181 | 0.0116 | 0.0042 | 0.0016 | a．cx） |
| 81 | 0.7059 | 0.8000 | 0.3854 | 0.2534 | 0.1813 | 0.1301 | 0.0937 | 0．0975 | 0.0490 | 0.0355 | 0．0259 | 0.0180 | $0.013{ }^{\text {a }}$ | 0.0102 | 0.0075 | 0.0055 | 0.0017 | 0.0008 | $\cdots$ |
| 4 88 | 0.6989 | 0.5802 | 0.3450 | 0.2487 | 0.1727 | 0．1287 | 8.0978 | 0.0828 | 0.0449 | 0，0323 | 0.0234 | 2.0188 | 0.0129 | 0，0089 | 0.0005 | 0.0098 | 0.0014 | $\cdots$ | \％ |
| 40， | 0.5747 | 0，4829 | 0.3088 | 0.2083 | 0.1429 | 0．0972 | 0.0698 | 0.0480 | 0.0318 | 0.0221 | 0.5184 | 0.0107 | 0．0976 | 0.0053 | 0.0037 | 0.0035 | 0.0007 | ＊ |  |
| －Bay | 0.8080 | 0.3718 | 0.2231 | 0.1407 | 0.0872 | 0.0543 | 0.0398 | 0.0213 | 0.0434 | 0．0nas | 0.0004 | 0.0035 | 0.0092 | 0.0014 | 0.0005 | 0.0000 |  |  |  |



| Aeflod |  | 3 ${ }^{2}$ | 83\％ | 4\％ | 攷象： | － | 7\％ | 部 |  |  | 143） |  | 4．735： | 14\％ | － 20.2 | US5 | 20\％ | 26） |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | 0.8801 | 0.9804 | 0.3709 | 0.8618 | 0.9824 | 0．9434 | 0.9346 | 0，0258 | 0.0174 | Q．8001 | 0.9009 | 0.8929 | 0．8850 | 0.3772 | 0．40398 | 0，\％${ }^{\text {a }}$ 21 | 0.8333 | 0.0068 | amm |
| 4 | 1.9708 | 1．8418 | 1，9135 | 1．8031 | 1．5535 | 1.8334 | 1.8000 | 1.7833 | 1.7801 | 1．7356 | 1.7123 | 1.0591 | 1．4655 | 7．361尔7 | 1．32927 | 1.6052 | 4．5278 | 14560 | 1．4．4 |
|  | 2.9410 | 2.8838 | $2 \mathrm{2a35}$ | 2.7751 | 2.7232 | 2.6730 | 2．8243 | 2.5771 | 2.5313 | 24380 | 2 A 437 | 2.4048 | 2.3812 | 2.3218 | 2.2038 | 2.2459 | 2.1085 | 1．2813 | 1.80 |
| \％ | 3.9020 | 3.8077 | 3.7171 | 3.6209 | 3.5450 | 3．4051 | 3.3872 | 3，3121 | 3，2337 | 3.1600 | 3.1026 | 3.0373 | 2.0746 | 2.9137 | 2.806 | 2.7982 | 2.5837 | 2.404 | 231 |
| 4ctid | 4.8634 | 4.7125 | 4.5797 | 4.4518 | 4．3295 | 4.2124 | 4，1002 | 3.9827 | 3．83097 | 3，7808 | 3．693解 | 3.6040 | 3.5172 | 38331 | 3，3622 | 3.2743 | 2．950 | 2.7454 | 288 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ${ }^{2}$ | 8.745 | 8.8014 | 6.417 | 3.2431 | 5.0767 | 4.8179 | ．7606 | 4.62210 | 5159 | 4，3583 | 4.2306 | 114 | 3．5076 | 3.8858 | 3，7645 | 3.55847 | 3．3265 | 3．020 | 2. |
| 2\％ | 8.7202 | 6．4720 | 6.2393 | 8．0021 | B．73es | 8．8024 | B．3893 | 6.2004 | ．03850 | 4．8884 | 4.7122 | 4.8538 | 4．433a | 4．3683 | 4．1804 | 4．038s | 3.6045 | 3，2425 | 3．16I |
| 2．${ }^{4}$ | 7.6817 | 7．3245 | 7.0157 | 6.7337 | 8．5832 | 0．2098 | B．97t3 | 8.7480 | 6．5340 | 6．354 | 8.1461 | 4.9876 | 4.7308 | $4.53{ }^{\text {a }}$ | 4.4875 | 4.3438 | 3.8372 | 421 | 2．11 |
| 9 | 8.6880 | 0.1823 | 7．7051 | 7．4353 | 7.1078 | 6．3097 | 0.6162 | 6．2469 | 5．9562 | 5.7850 | 5．8370 | 8.3282 | 5，4317 | 4.9484 | 4.7710 | 4．5085 | 4.0310 | 3.5085 |  |
| 13 | 2.4713 | 8. | 0． 6 | 3，1109 | 7.7217 | 7. | 7.0236 | 8.71 | 6.4177 | B．1 | 5．8092 | 5．6502 | 5．4\％22 | 6．2961 | 6．0100． | 4，0332 | 4.1825 | 3.5919 | 397 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2， 11 | 10.388 | 0.7 | 9．2526 | 8.78005 | 8.3034 | 7．85S9 | 7.4897 | 7．1300 | 062 | 4851 | 0.2085 | 8．8377 | Sa68 | 5．9627 | 8， 3393 | 6.0258 | 4.3275 | 3.7787 |  |
| 3 | 11．285 | 10．675 | 8．0140 | 2.3351 | 2．8833 | 8．3asa | 7.9437 | 7．5399 | 8.1007 | 0.8137 | 6.4824 | 6．ts 4 | 5．9476 | 8．8803 | 8.4204 | 6.51971 | 4．4392 | 3514 |  |
| 43． | 12.134 | 11．34 | 10．635 | 2.9800 | 9．383\％ | 3．8587 | 0.3577 | 7.8038 | 74889 | 7.1030 | 6.74918 | 0.4235 | 6.1298 | 5．3424 | $6.58{ }^{\text {E }} 31$ | 8．3423 | 4.5327 | 3.912 |  |
| 818 | 13．004 | 12109 | ＋1．293 | 10.003 | 4. | 0.20950 | 488 | 8.24 | 7.7802 | 7.3807 | 6． 3810 | 6． 2238 | 6．302\％ | 6.9021 | 6.7285 | 8．A678 | 4．610］ | 3．5618 |  |
| 319 | 13. | 12 | 11．838 | 11．118 | 10．380 | 9.7122 | 8.1079 | 6．8598 | e97 | 7.8001 | 7．1909 | B． $\mathrm{r}_{10}$ |  | 6．1423 | 5．8974 | 5765 | 4785 | 0913 |  |
| － |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 18 | 14.798 | 13.578 | 12．981 | 11．862 | 10．858 | 10.108 | 2．4485 | 6．8514 | 8．3128 | 7．3237 | 7．3702 | 8．8749 | B．8032 | 0.2861 | 9542 | 3．6888 | 47206 | 0333 |  |
|  | 15.432 | 14.202 | 13．160 | 12．185 | 11.274 | 10．477 | 8.7638 | 8.1216 | 8.8438 | 8.0216 | 7.8448 | 7.1188 | 6.7209 | B．3729 | 6.0472 | 5.7437 | 4.7746 | 4.0851 | 1.4 |
| － 1 IT． | 16．398 | 14.982 | 13.764 | 12.689 | 19，690 | 10.838 | 10.059 | 0.3719 | 2．705s | 3.2014 | 7.7088 | 7.2487 | 6．8309 | 24874 | 6.1230 | 8.8178 | 4.1122 | 4．0780 |  |
| 1936． | 17.228 | p8．67a | 14.324 | 13.134 | 12.086 | 11．158 | 10.338 | 2．e038 | ． 9881 | 8.38 | 7．a303 | 7．3658 | 3380 | 8509 | 98 | 3775 | ． 8435 | 4.0087 |  |
| \％ 24. | 18.0 | 10 | 14．377 | 13. | 12．462 |  | 10.50 | 0.8131 | 9．12遃 | 3.843 |  | 7．4096 | 7.0248 | 52ar | 6．2505 | 5．9238 | 4.8695 | 4.1103 | 3.3 |
| 46］ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 21. | 18.857 | 17，014 | 18．416 | 14.023 | 12.831 | 11.70 | 0.836 | 10.01 | 2.292 | 2．4437 | 8．0781 | 7.6520 | 1018 | 8870 | 6．312\％ | 6．9731 | 8618 | 1212 | 14 |
| 2203 | 12.889 | 87，458 | 15．937 | 14．451 | 13，163 | 12.042 | 11．001 | 18.201 | 9，4925 | 0.7718 | 8.1787 | 7．6448 | 7．1295 | 8.7429 | 6．3897 | 6.0113 | 4.9094 | 4.1300 | 3．150 |
| 等 | 20.486 | 18.202 | 18．44 | 14．887 | 13.450 | 12．308 | 11.272 | 10.37 | 0．3802 | 0.85382 | 8.2854 | 7.7184 | 7.2207 | 6．7921 | 6，3085 | 6.4442 | ． 9245 | 4.1377 |  |
| 318 | 21.283 | 18.914 | 18．835 | 18．247 | 13．780 | 12．050 | 11．489 | 10．629 | 9，7006 | 8．ce47 | 8.3881 | 7．7043 | 7.2329 | 6．8．351 | CAS39 | 6.0738 | 4.9371 | 4.1428 | 2.9 |
| 2ricy | 22.023 | 18.523 | 17．413 | 15 | 14.094 | 12.783 | 11．064 | 10.575 | 225 | 2.0 | 8.4817 | 7．8451 | 7.3300 | 8.8729 | Q．A | 8．0971 | 4．8476 | 4.142 | 3 344 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 30 | 25.008 | 22.398 | 19，000 | 17，292 | 15.372 | 13.768 | 12409 | 11．289 | 10.274 | B． 2850 | 8．6s898 | 8，0．0382 | 7．9907 | 7.0027 | 6.5500 | 6.1772 | 4．0708 | 4.18001 | 20 |
| \％at | 29，405 | 24.595 | 27.407 | 18．065 | 18.374 | 14．405 | 12．549 | 11．655 | 10.867 | 1．5442 | 6．4838 | 0.4785 | 7．585 | 7.0700 | a．stee | 0.2158 | 4.8915 | 4.1644 | 2 ${ }^{\text {W }}$ |
| \％${ }^{\text {che }}$ | 30.108 | 23.489 | 21.932 | 18．803 | 18.647 | 14．821 | 13.035 | ． 11.747 | 10.912 | 0．8785 | 3．973 | 0，1224 | 7．8979 | 7.9790 | 6，3231 | 6.2201 | 4．83820 | 4，1640 | L．M |
| 4.40 | 32.835 | 27， 355 | 23.115 | 12.703 | 17．150 | 18.046 | 13，832 | 11．328 | 88．787 | 8.7781 | 0.9611 | 0．2438 | 7．9398 | 7.1050 | 6.0440 | 6，2335 | 4.9990 | 4.6659 | 2， $\mathrm{M}_{1}$ |
| 30 | 38.198 | 31.424 | 28.730 | 21.482 | 18.255 | 15.782 | 13.691 | 12.233 | 10.802 | $0.8+48$ | 2， 0 ， 17 | A．39A8 | 7.0762 | 7.1327 | 0.8805 | 8，2483 | 4.989 | 4.16 |  |

