## CEL 779: CONSTRUCTION ECONOMICS AND FINANCE of CIVIL ENGINEERING, IIT DELHI MINOR 2

pate: 22<sup>nd</sup> March 2014 Time: 08:00 - 09:00 AM

Venue: VI-LT 2

Max Marks: 20

NOTE:

- 1. CELL PHONE NOT ALLOWED EVEN IN SWITCHED OFF MODE. KEEP IT AWAY FROM YOU EITHER IN YOUR BAG OR HAND IT OVER TO THE INVIGILATOR DUIRING EXAMINATION.
- 2. CASH FLOW WHERE REQUIRED IS MUST AND WILL CARRY APPROPRIATE MARKS. 3. USE YOUR OWN CALCULATOR, EXCAHNGE OF CALCULATORS IS NOT ALLOWED.
- Prepare the three financial statements (viz., "Profit and Loss Statement", "Statement of Retained Earning" and "Balance Sheet") for M/s ABC for the year financial year ending 2012-13 from the data given in the Table 1 below.

Table 1: Inputs on various Financials of M/s ABC as on 31st March 2013

| Income from Software Development   | 1       |   | es are ₹ in cro  |
|------------------------------------|---------|---|------------------|
| services & Products                | 2603.6  | Jasir & Barik Baranice                    | 772.2            |
| Buildings & other fixed assets     |         | (A)                                       |                  |
| Loans & Advances                   | 567.6   | Share capital                             | 33.1             |
| Other income                       | 643.9   | Additional paid in capital (2)            | 44.4             |
| Software development               | 66.4    | Admin & other expenses                    | 211,4            |
| Software development expenses      | 1,224.8 | Selling & Mkt expenses                    |                  |
| Sundry debtors Current liabilities | 336.7   | Capital work in progress                  | 150.7            |
|                                    | 126.1   | Provisions for other                      | 333.3            |
| Deferred Tax Asset                 |         | liabilities (L)                           |                  |
|                                    | 24.2    | Depreciation                              | 160.7            |
| Reserves & surpluses               | 2,047.2 | Provision for tax                         | 135.4            |
| Dividend                           | 137.4   | Amount transferred to<br>General Reserves | As per statement |

8 marks

Ramesh buys an office building space for ₹30.0 lakh on 10 years lease. After the purchase of the office space, he also spends another ₹5.0 lakh on office furniture. On the expiry of the lease period Ramesh has to handover the office space in "as is" condition without any salvage. His chartered accountant advises him that his capital expenditure of ₹35.0 lakh though cannot be shown as expenditure for the year for tax purposes; he can show the depreciation in 10 years time for tax purposes. Depreciation for the building assets would however be calculated on sinking fund method. Calculate the actual amount for depreciation expenses for the ten years. Take i = 12 per cent.

6 marks

3. A truck was bought 10 years ago for ₹35.0 lakh; its current salvage value (net realizable) is ₹7.0 lakh. It is believed that it can last 5 more years, at which time salvage value (net realizable) will be ₹4.0 lakh. Its operating expenses amount to amount to ₹7.0 lakh per year and they are expected to remain at that level for the next 5 years. The truck is currently being depreciated by straight-line method, using a 15-year life and estimated salvage of ₹5.0 lakh. A new truck can be purchased for ₹32.5 lakh. It will have yearly operating cost of ₹4.5 lakh and would last for 20 years; salvage value after 20 years is estimated at ₹7.5 lakh. Again, straight-line depreciation would be used. Supposing that tax rates are 30% on income and 15% on capital gains (or losses), and that the company's after-

## Interest Table for i =12 percent

| EOY | PIF      | F/P      | A/F      | F/A       | P/A      | A/P      | F/G        |          |          |          |           |          |
|-----|----------|----------|----------|-----------|----------|----------|------------|----------|----------|----------|-----------|----------|
| 1   | 0.892857 | 1.120000 | 1.000000 | 1.000000  | 0.892857 | 1.120000 | 110        | G/F      | A/G      | G/A      | P/G       | G/P      |
| 2   | 0.797194 | 1.254400 | 0.471698 | 2.120000  | 1.690051 |          |            |          | _        |          | 0.000000  | 1.5441E+ |
| 3   | 0.711780 | 1.404928 | 0.296349 |           |          | 0.591698 | 1.000000   | 1.000000 | 0.471698 | 2.120000 | 0.797194  | 1.254400 |
|     | 0.635518 | 1.573519 |          | 3.374400  | 2.401831 | 0.416349 | 3.120000   | 0.320513 | 0.924609 | 1.081538 | 2.220754  |          |
| E S |          |          | 0.209234 | 4.779328  | 3.037349 | 0.329234 | 6.494400   | 0.153979 | 1.358852 | 0.735915 | 4.127309  | 0.450297 |
|     | 0.567427 | 1.762342 | 0.157410 | 6.352847  | 3.604776 | 0.277410 | 11.273728  | 0.088702 | 1.774595 | 0.563509 |           | 0.242289 |
| 6   | 0.506631 | 1.973823 | 0.123226 | 8.115189  | 4.111407 | 0.243226 | 17.626575  | 0.056733 | 2.172047 |          | 6.397016  | 0.156323 |
| 7   | 0.452349 | 2.210681 | 0.099118 | 10.089012 | 4.563757 | 0.219118 | 25.741764  | 0.038847 |          | 0.460395 | 8.930172  | 0.111980 |
| 8   | 0.403883 | 2.475963 | 0.081303 | 12.299693 | 4.967640 | 0.201303 | 35.830776  |          | 2.551465 | 0.391932 | 11.644267 | 0.085879 |
| 9   | 0.360610 | 2.773079 | 0.067679 | 14.775656 | 5.328250 | 0.187679 |            | 0.027909 | 2.913144 | 0.343272 | 14.471450 | 0.069102 |
| 10  | 0.321973 | 3.105848 | 0.056984 | 17.548735 | 5.650223 |          | 48.130469  | 0.020777 | 3.257417 | 0.306992 | 17.356330 | 0.057616 |
| 11  | 0.287476 | 3.478550 |          |           |          | 0.176984 | 62.906126  | 0.015897 | 3.584653 | 0.278967 | 20.254089 | 0.049373 |
| 12  | 0.256675 |          | 0.048415 | 20.654583 | 5.937699 | 0.168415 | 80.454861  | 0.012429 | 3.895255 | 0.256723 | 23.128850 | 0.043236 |
| 13  |          | 3.895976 | 0.041437 | 24.133133 | 6.194374 | 0.161437 | 101.109444 | 0.009890 | 4.189653 | 0.238683 | 25.952276 | 0.038532 |
|     | 0.229174 | 4.363493 | 0.035677 | 28.029109 | 6.423548 | 0.155677 | 125.242577 | 0.007985 | 4.468304 | 0.223799 | 28.702366 | 0.034840 |
| 14  | 0.204620 | 4.887112 | 0.030871 | 32.392602 | 6.628168 | 0.150871 | 153.271686 | 0.006524 | 4.731688 | 0.211341 | 31.362424 | 0.031885 |
| 15  | 0.182696 | 5.473566 | 0.026824 | 37.279715 | 6.810864 | 0.146824 | 185.664289 | 0.005386 | 4.980303 | 0.200791 | 33.920171 | 0.029481 |
| 16  | 0.163122 | 6.130394 | 0.023390 | 42.753280 | 6.973986 | 0.143390 |            |          | 5.214664 | 0.191767 | 36.366996 | 0.027497 |
| 17  | 0.145644 | 6.866041 | 0.020457 | 48.883674 | 7.119630 | 0.140457 | 222.944003 | 0.004485 |          |          |           |          |
| 18  | 0.130040 | 7.689966 | 0.017937 | 55.749715 | 7.249670 | 0.137937 | 265.697284 | 0.003764 | 5.435297 | 0.183983 | 38.697306 | 0.025842 |
| 19  | 0.116107 | 8.612762 | 0.015763 | 63.439681 | 7.365777 |          | 314.580958 | 0.003179 | 5.642737 | 0.177219 | 40.907979 | 0.024445 |
| 20  | 0.103667 | 9.646293 | 0.013879 | 72.052442 | 7.469444 | 0.135763 | 370.330673 | 0.002700 | 5.837524 | 0.171305 | 42.997901 | 0.023257 |
|     |          |          |          | 72.002.12 | 7.408444 | 0.133879 | 433.770354 | 0.002305 | 6.020203 | 0.166107 | 44.967569 | 0.022238 |