Reg. No. | | | | | | | | | | |

# MANIPAL INSTITUTE OF TECHNOLOGY
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## VI SEMESTER B.TECH. (COMMON TO ALL)

## END SEMESTER MAKE-UP EXAMINATIONS- JULY 2022

### SUBJECT: FINANCIAL MANAGEMENT [HUM 4051]

#### REVISED CREDIT SYSTEM

Time: 3 Hours                                                                MAX. MARKS: 50

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### Instructions to Candidates:

❖ Answer **ALL** the questions.
❖ Interest factor table are provided, for others use formulae
❖ Missing data may be suitably assumed.

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**1A)** Reizenstein Trucking (RT) has just developed a solar panel capable of generating 200% more electricity than any solar panel currently on the market. As a result, RT is expected to experience a 15% annual growth rate for the next 5 years. By the end of 5 years, other firms will have developed comparable technology, and RT's growth rate will slow to 5% per year indefinitely. Stockholders require a return of 12% on RT's stock. The most recent annual dividend (D0), which was paid yesterday, was $1.75 per share. **(03)**

    a)    Calculate RT's expected dividends for t=1, t=2, t=3, t=4, and t=5.

    b)    Calculate the value of stock today.

**1B)** A firm borrows Rs.10 lakhs at 10 percent interest hoping that it can earn double the interest rate by utilizing the amount within the firm. This amount is borrowed by issuing 20 year bonds, with a promise of sinking fund to be setup. The firm will set aside a payment each year and put it in an external account, which pays 4 percent annually compounded interest. Find the annual payments into the sinking fund and total debt repayment.(use interest factor formula) **(03)**

**1C)** List the bond value theorems and prove any one of the theorem. **(04)**

**2A)** State the objective of Financial Management. Explain any THREE key **(03)** functions of financial management.

**2B)** Journalize the following transactions and prepare the ledger for Cash **(05)** account.

- Issued capital stock for $16,000.
- Paid rent on office building for the month, $3,000.
- Purchased supplies from X, $1,200.
- Paid creditor on account, $800.
- Sold goods to customers worth, $22,500 on credit.
- Paid automobile expenses for month, $3,350.
- Paid office salaries, $4,200.
- Paid cash to X amounting $960.
- Paid cash dividends, $1,400.

**2C)** Explain Pre-emptive right and Right to Income with respect to an equity share. **(02)**


**3A)** Explain in detail the features of a Preference share. **(03)**

**3B)** Differentiate between debentures and equity shares. **(03)**

**3C)** Your company is considering two mutually exclusive projects, X and Y, whose **(04)** costs and cash flows are shown below:

| Year | 0 | 1 | 2 | 3 | 4 |
|------|-----|-----|-----|-----|-----|
| X | (1000) | 100 | 300 | 400 | 700 |
| Y | (1000) | 1000 | 100 | 50 | 50 |

The projects are equally risky and their cost of capital is 12%.
  i) Make recommendation, and you must base it on the modified IRR (MIRR). What is the MIRR of the better project?
  ii) Also, determine the payback period of the selected project.


**4A)** Briefly explain operating cycle and the cash conversion period and inventory **(04)** conversion period with respect to operating cycle.

**4B)** What is Working Capital Management. State the significance of working **(03)** capital management.

**4C)** Write a note on: **(03)**
  1. Gross Working Capital
  2. Temporary Working Capital
  3. Net Working Capital

**5A)** From the following balance given below, prepare P&L A/c of M/s. Diviya Ltd. **(03)**
for the year ending 31.12. 2021

| | Rs. | | Rs. |
|---|---|---|---|
| Gross profit | 55,000 | Repairs | 500 |
| Carriage on sales | 500 | Telephone expenses | 520 |
| Office Rent | 500 | Interest (Dr.) | 480 |
| General expenses | 900 | Fire insurance premium | 900 |
| Discount to customers | 360 | Bad debts | 2,100 |
| Interest from Bank | 200 | Apprentice Premium (Cr.) | 1,500 |
| Traveling expenses | 700 | Printing & Stationary | 2,500 |
| Salaries | 900 | Trade expenses | 300 |
| Commission | 300 | | |

**5B)** Explain the important components in a balance sheet. **(03)**

**5C)** You need Rs.28,974 at the end of 10 years, and your only investment outlet **(04)**
is an 10 percent long-term certificate of deposit (compounded annually). With
the certificate of deposit, you make an initial investment at the beginning of
the first year.
   a) What single payment could be made at the beginning of the first year to
      achieve this objective?
   b) What amount could you pay at the end of each year annually for 10
      years to achieve this same objective?

**10%**

| n | F/P | P/F | A/F | A/P | F/A | P/A | A/G | P/G | n |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.100 | .9091 | 1.0000 | 1.1000 | 1.000 | 0.909 | 0 | 0 | 1 |
| 2 | 1.210 | .8264 | .4762 | .5762 | 2.100 | 1.736 | 0.476 | 0.826 | 2 |
| 3 | 1.331 | .7513 | .3021 | .4021 | 3.310 | 2.487 | 0.937 | 2.329 | 3 |
| 4 | 1.464 | .6830 | .2155 | .3155 | 4.641 | 3.170 | 1.381 | 4.378 | 4 |
| 5 | 1.611 | .6209 | .1638 | .2638 | 6.105 | 3.791 | 1.810 | 6.862 | 5 |
| 6 | 1.772 | .5645 | .1296 | .2296 | 7.716 | 4.355 | 2.224 | 9.684 | 6 |
| 7 | 1.949 | .5132 | .1054 | .2054 | 9.487 | 4.868 | 2.622 | 12.763 | 7 |
| 8 | 2.144 | .4665 | .0874 | .1874 | 11.436 | 5.335 | 3.004 | 16.029 | 8 |
| 9 | 2.358 | .4241 | .0736 | .1736 | 13.579 | 5.759 | 3.372 | 19.421 | 9 |
| 10 | 2.594 | .3855 | .0627 | .1627 | 15.937 | 6.145 | 3.725 | 22.891 | 10 |
| 11 | 2.853 | .3505 | .0540 | .1540 | 18.531 | 6.495 | 4.064 | 26.396 | 11 |
| 12 | 3.138 | .3186 | .0468 | .1468 | 21.384 | 6.814 | 4.388 | 29.901 | 12 |
| 13 | 3.452 | .2897 | .0408 | .1408 | 24.523 | 7.103 | 4.699 | 33.377 | 13 |
| 14 | 3.797 | .2633 | .0357 | .1357 | 27.975 | 7.367 | 4.996 | 36.801 | 14 |
| 15 | 4.177 | .2394 | .0315 | .1315 | 31.772 | 7.606 | 5.279 | 40.152 | 15 |

**12%**

| n | F/P | P/F | A/F | A/P | F/A | P/A | A/G | P/G | n |
|---|-----|-----|-----|-----|-----|-----|-----|-----|---|
| 1 | 1.120 | .8929 | 1.0000 | 1.1200 | 1.000 | 0.893 | 0 | 0 | 1 |
| 2 | 1.254 | .7972 | .4717 | .5917 | 2.120 | 1.690 | 0.472 | 0.797 | 2 |
| 3 | 1.405 | .7118 | .2963 | .4163 | 3.374 | 2.402 | 0.925 | 2.221 | 3 |
| 4 | 1.574 | .6355 | .2092 | .3292 | 4.779 | 3.037 | 1.359 | 4.127 | 4 |
| 5 | 1.762 | .5674 | .1574 | .2774 | 6.353 | 3.605 | 1.775 | 6.397 | 5 |
| 6 | 1.974 | .5066 | .1232 | .2432 | 8.115 | 4.111 | 2.172 | 8.930 | 6 |
| 7 | 2.211 | .4523 | .0991 | .2191 | 10.089 | 4.564 | 2.551 | 11.644 | 7 |
| 8 | 2.476 | .4039 | .0813 | .2013 | 12.300 | 4.968 | 2.913 | 14.471 | 8 |
| 9 | 2.773 | .3606 | .0677 | .1877 | 14.776 | 5.328 | 3.257 | 17.356 | 9 |
| 10 | 3.106 | .3220 | .0570 | .1770 | 17.549 | 5.650 | 3.585 | 20.254 | 10 |
| 11 | 3.479 | .2875 | .0484 | .1684 | 20.655 | 5.938 | 3.895 | 23.129 | 11 |
| 12 | 3.896 | .2567 | .0414 | .1614 | 24.133 | 6.194 | 4.190 | 25.952 | 12 |
| 13 | 4.363 | .2292 | .0357 | .1557 | 28.029 | 6.424 | 4.468 | 28.702 | 13 |
| 14 | 4.887 | .2046 | .0309 | .1509 | 32.393 | 6.628 | 4.732 | 31.362 | 14 |
| 15 | 5.474 | .1827 | .0268 | .1468 | 37.280 | 6.811 | 4.980 | 33.920 | 15 |