Test - 3		
Time Allowed: 1 hour 20 minutes	**16-FEB-2020**	**Total Marks :44 Marks**

Q.1. Explain Certainty Equivalent. **(4 Marks)**

Q.2. An investment in new machinery is being considered. The machine will cost ₹ 40,000 and will last for seven years. It is expected to yield saving in raw material cost of ₹ 4,000 p.a. (due to lower wastage) and it is hoped also to achieve some labour savings. The company's cost of capital is 12%.

What amount of estimated labour savings will render the project viable? Given that the present value of an annuity for 7 years at 12% = ₹ 4.564. Ignore depreciation.

(5 Marks)

Q.3 A hospital is considering to purchase a diagnostic machine costing ₹ 80,000. The projected life of the machine is 8 years and has an expected salvage value of ₹ 6,000 at the end of 8 years. The annual operating cost of the machine is ₹ 7,500. It is expected to generate revenues of ₹ 40,000 per year for eight years. Presently, the hospital is outsourcing the diagnostic work and is earning commission income is ₹ 12,000 per annum; net of taxes. Tax rate may be assumed to be 25%. Cost of capital is 10%. **Whether** it would be profitable for the hospital to purchase the machine. **Give** your recommendation under: - **(i)** Net Present Value method.**(ii)** Profitability Index method

[Note:- PVAF@10% (Years 1 to 7) = 4.868. PVF@10% (Years 8) = 0.467] **(5 Marks)**

Q.4. A company is considering the purchase of a new machine out of following two machines: -

Particulars				Machine MX	Machine MY
Cost of Machine (₹)				8,00,000	10,20,000
Expected Life				6 years	6 years
Scrap Value (₹)				20,000	30,000

Profit before Depreciation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Machine MX	2,50,000	2,30,000	1,80,000	2,00,000	1,80,000	1,60,000
Machine MY	2,70,000	3,60,000	3,80,000	2,80,000	2,60,000	1,85,000

Additional Information: -

(a) Tax Rate is 30%   **(b)** Cost of Capital is 10%   **(c)** Depreciation would by straight line method

You are **required** to **c**alculate NPV and suggest the best machine to be purchased.

(10 Marks)

Q.5. A company wants to invest in machinery that would cost ₹ 50,000 at the beginning of year 1. It is estimated that the net cash inflows from operations will be ₹ 18,000 per annum for 3 years, if the company opts to service a part of the machine at the end of year 1 at ₹10,000 and the scrap value at the end of year 3 will be ₹ 12,500.

However, if the company decides not to services the part, it will have to be replaced at the end of year 2 at ₹ 15,400. But in this case, the machine will work for the 4th year also and get operational cash inflow of ₹ 18,000 for the 4th year also and get operational cash inflow of ₹ 18,000 for the 4th year. It will have to be scrapped at the end of year 4 at ₹ 9,000. Assuming cost of capital at 10% and ignoring taxes, will you recommend the purchase of this machine based on the net present value of its cash flows?

The present value factors at the end of year 0, 1, 2, 3, 4, 5 and 6 respectively 1, 0.9091, 0.8264, 0.7513, 0.6830, 0.6209 and 0.5644. **(10 Marks)**

Q.6. Explain Balance Sheet Channel of Monetary Policy. **(2 Marks)**

Q.7. Explain Statutory Liquidity Ratio. **(2 Marks)**

Q.8. What are the critical points of quantity theory of money? **(3 Marks)**

Q.9. Explain Credit Multiplier. **(3 Marks)**