**12. Raising finance Mark: /15**

1. Josh has £50 000 in a savings account. He intends to leave it there for the next 3 years and has a fixed annual interest rate of 3% per year. How much will Josh have in personal savings at the end of 3 years £50 000? /4 marks

Formula for compound interest is:

PV x (1 + r)n = FV

Where PV = Present value, r = interest rate, n = time period and FV = future value.

PV = £50 000, r = 3%

£50 000 x (1.03)3 = **£54 636.35**

Or:

Year 1 £50 000 x 1.03 = £51 500

Year 2 £51 500 x 1.03 = £53 045

Year 3 £53 045 x 1.03 = **£54 636.35**

1. Sanja Ltd’s is experiencing short term cash flow problems and considering an overdraft.

The bank has offered Sanja Ltd a 3 month overdraft at 5% on the condition that £50 000 is paid back at the end of each month. Interest will be charged on the balance at the start of the month.

1. How much will Sanja have to pay back in interest in month 1? /2 marks

Month 1 = £200 000 x 0.05 = **£10 000**

1. How much will Sanja have to pay back in interest in month 2? /3 marks

Month 2 = £200 000 - £50 000 = £150 000 x 0.05 = **£7 500**

1. Sanja Ltd wants to raise £750 000 to buy a new machine. The bank has offered to lend it the money at 4% interest over 4 years.
   1. What is the compound rate of interest over the four year period? /4 marks

PV x (1 + r)n = FV

Where PV = Present value, r = interest rate and FV = future value.

PV = £750 000, r = 4%, n = 4 years

£750 000 x (1.04)4 **= £877 393.92**

Or:

Year 1 £750 000 x 1.04 = £780 000

Year 2 £780 000 x 1.04 = £811 200

Year 3 £811 200 x 1.04 = £843 648

Year 4 £843 648 x 1.04 = **£877 393.92**

* 1. What is the total interest payment as a percentage of the original loan? /2 marks

£877 393.92 **-** £750 000 =£127 393.92

£127 393.92/£750 000 x 100 = **16.99%**

What are the advantages and disadvantages of using a loan

rather than share capital to raise long term finance?