

Business Studies Supervision 1 (2017/18)

1. Our company has received an offer to develop a new fraud detection system for a bank with the following project details:
 - Duration: 6 months
 - Development costs including the month of Go-Live: 200k/month
 - Installation costs for Go-Live: 150k
 - Maintenance costs after the month of Go-Live: 50k/month

The Go-Live of the project is expected in **Month 3** and the contract worth of \$1M sets out the following payments:

- 20% payment at the project start
- 30% payment at the end of **Month 3** (Go-Live)
- 50% at the end of **Month 6** (Project End)

Draw up the cash flow and calculate the financial needs over time of the project, if any. Should we sign the contract? Justify your answer.

2. Briefly describe 5 different types of intellectual property and discuss their relevance for software companies.
3. Briefly describe the Maslow's Hierarchy of needs and discuss the relevance of the theory when managing employees.
4. With the raise of online collaboration software such as GitHub, the problems of co-ordination in large software projects are less eminent than 15 years ago. Discuss.
5. Outline the stages of group formation and discuss the respective challenges for start-ups.
6. Pick four products, one for each of the four product (life cycle) stages. Justify your answer by outlining important characteristics of each stage.
7. The *Figure 1* has been extracted from the books of New Software & Co. Prepare a profit and loss account for the information below for 31st of December.
8. A company has been presented with three different investment opportunities. Using the net present value (NPV) formulas and a discount rate of 8%, show which opportunity is best option for the company. Show and explain all supporting calculations.

A Cashflow A: receive \$60 today and then receive \$60 in four years.

	\$		\$
Stock on 1st January	11,000	Returns outwards	500
Bills receivables	4,500	Trade expenses	200
Purchases	39,000	Office fixtures	1,000
Wages	2,800	Cash in hand	500
Insurance	700	Cash at bank	4,750
Sundry debtors	30,000	Tent and taxes	1,100
Carriage inwards	800	Carriage outwards	1,450
Commission (Dr.)	800	Sales	60,000
Interest on capital	700	Bills payable	3,000
Stationary	450	Creditors	19,650
Returns inwards	1,300	Capital	17,900

Figure 1: New Software & Co. Financial Details

- B Cashflow B: receive \$7 every year, forever, starting today.
- C Cashflow C: pay \$ 50 every year for five years, with the first payment being next year, and then subsequently receive \$30 every year for 20 years.
9. To float or not to float? The famous British technology company Dyson generates almost \$2B in annual revenues, however it has remained a limited company (Ltd) since its inception. Alternatively, Zoopla, an online real estate platform has floated onto the London Stock Exchange (LSE) in 2014. Dell Computers was delisted from NASDAQ in 2013. Using information gathered from the internet and news articles, discuss why **Dyson**, **Zoopla** and **Dell** made the decisions they did. Focus on the motivation for public vs. private. You may want to consider the following areas.
- A Growth and exits
 - B Markets
 - C Legal contracts and compliance
 - D Money and trade
10. Debt to Equity Ratio
- A What is the formula for debt to equity ratio?
 - B Explain the motivations behind why a company might take more equity than debt and vice versa