Week 2

- Briefly describe data, process, information and knowledge, and explain an example of each component (need to understand the relationship and difference between them).
- **Explain why the value of information is important, and identify 3 (or 5) characteristics of quality information with a brief description.**
- Explain what the definition of BIS and what includes in the BIS.
- Describe the benefits of using BIS in organisations.
- Explain why business manager's involvement in BIS is important.
- **Describe four components of an information systems.**
- **Describe components of a computer-based BIS and explain the relationships between components of BIS.**
- **Describe what the business processes are and explain an example with a comprehensive process point of view.**

Week 3

- Describe what Enterprise Systems are and its purposes.
- Explain the pros and cons of Enterprise Systems.
- **Explain the key feature of ERP, SCM and CRM.**
- **Identify and discuss 2-3 key challenges** to the successful implementation of an enterprise system. Provide several tips to overcome these challenges.

Week 4 and 5

- Describe the key differences between Physical and Logical DFD.
- **Need to prepare Load Distance (LD) Analysis Calculation Questions (pp 13-17).**
    - **LD(i,j) = Load(i,j) X Distance(i,j)**
- **General Process Chart calculation Questions (pp. 8-11)**
- BPMN related questions??? --- Need to know three different gateways and a couple of events such as intermediate error event, intermediate timer event and intermediate message event

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Week 6

- **Describe five primary activities of Porter's Value chain theory (think about this question with a case study, pp. 8-12).**
- Discuss positive and negative effect on BIS consequences with an example (pp. 16-18).
- **Explain 7 key performance metrics to measure efficiency of business process (pp. 19-25).**
- Discuss three forces that are driving companies towards redesign (p. 33).
- **Describe the key differences between BPI and BPR (p. 44).**

Week 7

- Explain what the quality is
- **Discuss Six Sigma's five improvement methodology (<u>Define, measure, analyse, improve, and control).</u>**
- **Describe what the Six Sigma and Lean are.**
- **Describe the key differences between Six Sigma and Lean.**
- Need to prepare for Six Sigma calculation question (Please see the tutorial slide in Teams).
- Explain the seven wastes of Lean manufacturing (TIMWOOD – p. 23).

Week 8

- **Please thoroughly read and understand all the calculation questions presented in Week 8 Tutorial slides (in Teams) – Very important.**

Week 9

- Discuss the key difference between material flow and customer/workflow (p. 5).
- Describe the eight wastes of process (DOWNTIME – pp. 7-8).
- **Please prepare for a calculation question regarding Load-Distance Analysis with the description of the concept (pp. 13-14 – LD(i,j) = Load(i,j)*Distance(i,j)).   ---- Also, understand the concept of Just-In-Time (pp. 10-11) and Flowcharts (p. 16 -- ???) as a part of Material flow tool**
- Explain two basic ways of organising activities of work flow, including process orientation and product orientation (pp. 30-31).

- **Please prepare for a calculation question regarding Line Balancing (pp. 39-45) – Please thoroughly read and understand all sub-questions of discussion question 4 in Week 9 (including all the concepts).**
- Discuss what workflow management system (WFMS) and workflow systems (WFS) are and their purposes (p. 60).
- Explain pull system that is used in Kanban (p. 62).

Week 10

- **Discuss the key difference between waterfall and agile (connected with scrum and DevOps) methodology. (or main advantages of waterfall and agile – pp. 5-7 and pp. 54-58).**
- Describe six phases of system development process (Investigation, Analysis, Design, Construction/Coding, Integration/Testing and Implementation – p. 5).
- Explain the Pareto principle and why it is important to define system requirements.
- **Describe four types of testing in system development (p. 43)**.
- Discuss 4 key factors that consider Make or Buy decision (p. 59).

Week 11

- Describe the concept of insourcing and outsourcing, and their key advantage and disadvantages.
- **Explain three key reasons why organisations introduce IT outsourcing (Strategic, financial and technical – p. 11).**
- Discuss key factors that consider decision making for insourcing and outsourcing (think about the factors of Make or Buy decision).
- **Explain the difference between onshore outsourcing and offshore outsourcing with an example (p. 9).**
- By considering advantages of in-sourcing and out-sourcing, please think about the key features of selective IT outsourcing
- Describe what is IT governance and why it is important (pp. 38-42).
- **Discuss 5 key components of good governance (p. 35).**

Week 12

- Describe 3 common cybersecurity attacks (pp. 7-20) and their prevention techniques (pp. 26-30).
- Explain three types of cybersecurity detection system (<u>Intrusion Detection System (IDS), Knowledge-based IDS and Behaviour-Based IDS</u> – p. 31).