MSc Computing- Enterprise Software Systems

Exam Tips – Writing at Masters Level

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Objectives

Exam preparation tips

Differences when writing at MSc level

Exam terms in questions

Example question and answer guidelines

Revision

Exam Preparation

Plan your revision

- Write your own notes on your own understanding of topics covered each week.

Get organised

- Look at past papers to see how many questions you have to answer
  - This paper will have 3 questions, choose 2.
  - Each question is work 50 marks.
  - The questions usually have 2-3 parts – (a), (b) and (c).
  - Questions will have mixed topics.
  - You are required to write essay style answers.

- Plan your time
  - You'll probably need to allocate more time to topics you are less confident in

- Download past papers
  - Use them to practice reading and understanding the question – identify topics, plan answers and writing timed answers

In the Exam!

Read the questions carefully

Work out the timing- split your time proportionately if you have some questions (or parts of questions) which attract more marks than others. Allow some time for planning.

Read through the paper once before you choose your questions and then re-read each question to be sure your right about the topic asked.

Choose your best questions

Decide on question order. Some people like to start with the question they know most about e.g. Q3 (b). Be careful of your timing.

Structure your answer –

- Introduction – introduce topic and how you plan to answer the question.
- Make one point or argument per paragraph and summarise to show how it answers the question.
- Short paragraphs with one or two pieces of evidence are sufficient
- In your conclusion summarise the arguments to answer the question

Plan before you write (make notes on question paper)

Writing at Masters Level

So what do you think are the differences between writing at Masters level and writing at degree level?

- MSc – level 9
- BSc – level 8

Masters Level: Academic Views

‘Using high quality information to show in depth knowledge and understanding’

‘Examining issues in depth’

‘Always looking at things from different perspectives’

‘High level critical discussion’

‘Ability to deconstruct problems’

‘Problem solving using evidence’

ATHERTON J S (2011) DOCEO: WRITING AT MASTER'S LEVEL [ON-LINE: UK] RETRIEVED 26 SEPTEMBER 2011 FROM HTTP://WWW.DOCEO.CO.UK/ACADEMIC/M_WRITING.HTM

Masters Level: Academic Views (cont.)

‘Critical analysis and synthesis’

‘Constructing an argument’

‘Challenging assumptions’

‘Balanced, thorough judgments and conclusions’

‘Clear, concise writing’

Main Difference

Description - – keep to a minimum!

- To state the characteristics or appearance of ...
  - Cambridge Dictionary (2010).

Discussion – still key but not enough on its own

- When people talk about something and tell each other their ideas or opinions.
  - Cambridge Dictionary (2010).

Critical Thinking – Analysis

- It is common for feedback on student writing to focus on the need to engage more critically with the source material.

Think Critically!

What is critical analysis?

Do you agree or disagree with what has been said?

Can you explain why?

Is there evidence for or against your view?

Keep asking yourself, how would I use this information to answer a question?

Show how you can apply your knowledge to answer the question.

Thinking critically is - ‘Detailed examination of elements’

Analysis is sometimes seen as ‘taking things apart’ ‘breaking them down’ or ‘deconstructing’ them

Critical Thinking - Synthesis

Synthesis reconstructs things – puts things together to reach a conclusion and make a clearer picture

- ‘Combining elements into a whole’
- Present your point of view in a clear, well reasoned way *with justification*

COTTREL, S. (2005) CRITICAL THINKING SKILLS, BASINGSTOKE, PALGRAVE MACMILLAN.

Exam Terms

At MSc level – Exam Keywords:

Analyse, appraise, categorise, compare, criticise, debate, determine, differentiate, examine, argue, compile, construct, evaluate

Example Question

Argue for the use of big data analytics as an addition to a traditional data warehouse architecture rather than as a replacement

(20 marks)

Example marking criteria:

- intro – 4 marks
- main argument (4 main points to support your argument- see the next slide for examples) – 12 marks
- summary/conclusion – 2 marks
- question structure – 2 marks

Answer Preparation

Introduction: What is Data Warehouse and Big Data Analytics. State briefly how your going to address the answer in the coming paragraphs…

What's your argument ?

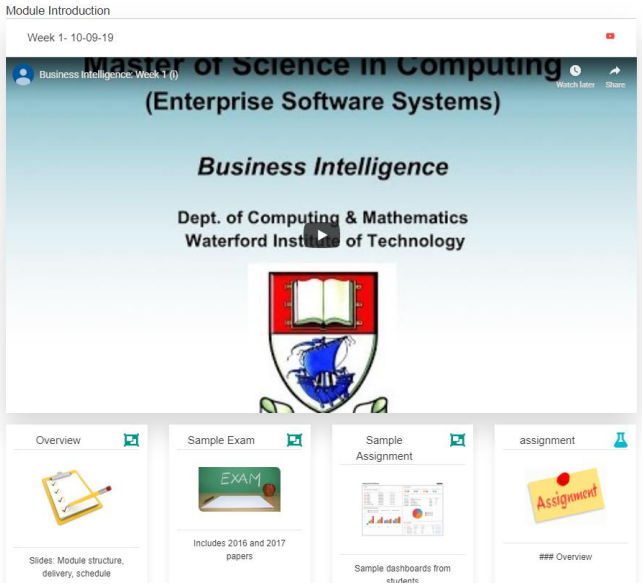
- Main points – success of DW, its characteristics – structured data, subject areas, cleansed data (the assurance of ETL- rationalising data formats, semantic meaning to make it understandable and trustworthy) DW performance
- Unstructured vs structured – show how needs are different especially with the challenges of Big Data - volume, variety, variance
- Interactive tools for end users – OLAP, Reporting/dashboards (Qlik, Tableau) data mining
- Integrates data – promise to answer essential questions
- Match requirements to each platform's ability – organisations are adopting Big Data technology, such as Hadoop for the uses of web data, social media, sensor data etc. so these data sets are inappropriate for a DW.

- Summary/conclusion - use cases for both- Hadoop (Big Data Analytics) is a repository and refinery, active archive, where DW is performance, integration of data for business value, with interactive BI tools.

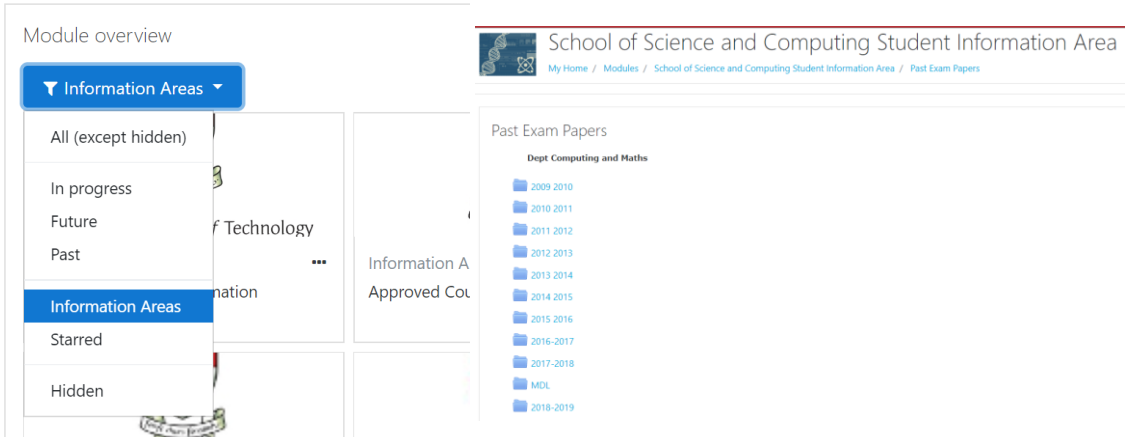
- Good article by Bill Inmon

Past Papers:

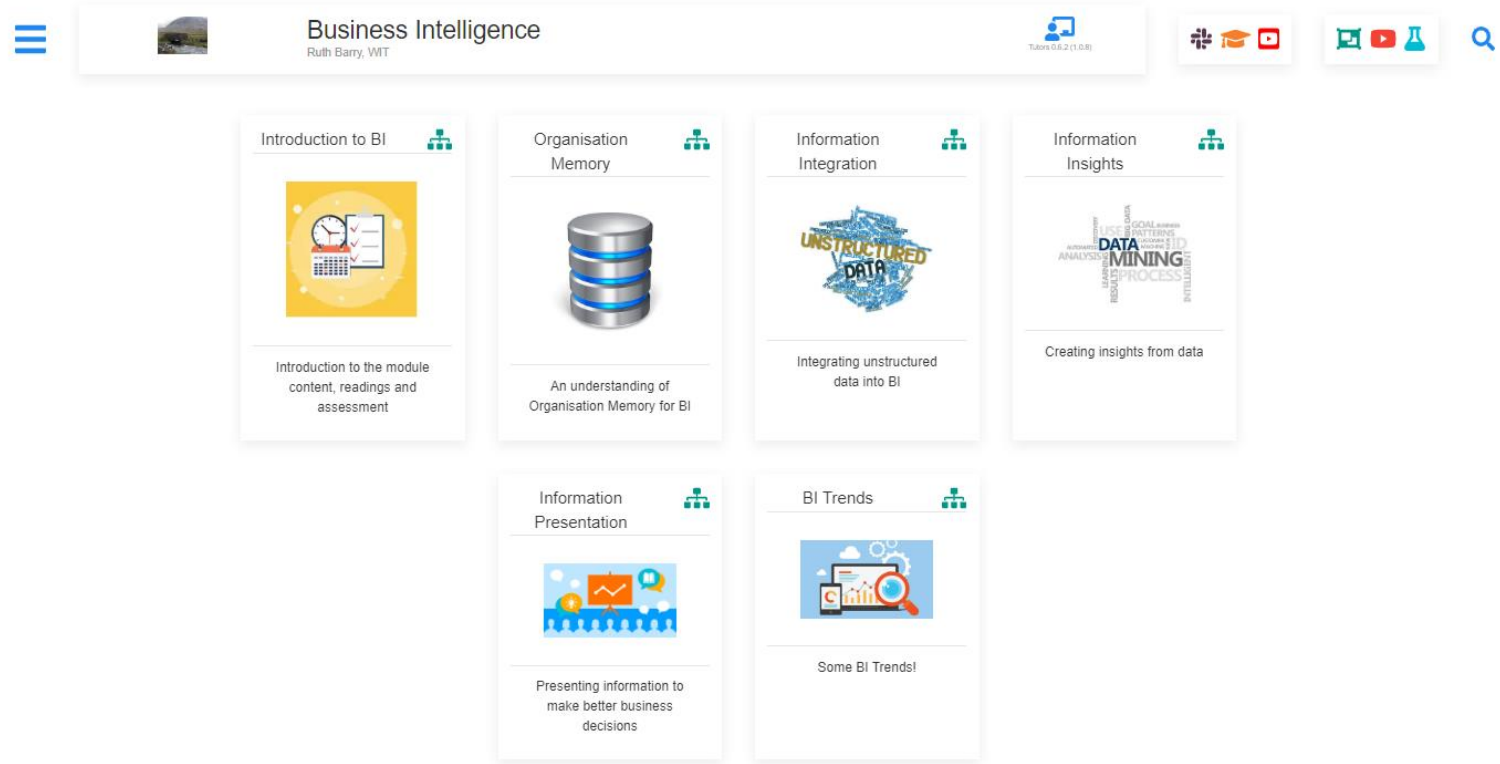
Some papers are available to view - intro section



Past papers are available in their school information area on Moodle:



Revision


Business Intelligence
Ruth Barry, WIT
Introduction to BI
Introduction to the module content, readings and assessment
Organisation Memory
An understanding of Organisation Memory for BI
Information Integration
UNSTRUCTURED DATA
Integrating unstructured data into BI
Information Insights
DATA MINING PROCESS
Creating insights from data
Information Presentation
Presenting information to make better business decisions
BI Trends
Some BI Trends!

Organisation Memory

Structured data

Data Warehouse

Characteristics

Data Mart

Two opposing approaches – top down (Inmon) and bottom up (Kimball)

ETL

OLTP Vs OLAP

Multidimensional schema – star and snowflake

Information Integration

Types of Data

Environmental scanning

Text mining – concepts, applications, terminology, algorithms and process

Web mining – content, structure, usage and metrics

Big Data – V's!

Example Applications

Challenges

ETL v ELT

Big Data Vendors technologies

Hadoop and its Ecosystem

Information Insight

Data mining

Applications in different industries

Process – CRISP

ASUM-DM

Types of patterns

Machine learning in Data Mining

Cluster analysis

Association analysis

Classification

Information Presentation

Metrics

Examples

KPI's

Business Performance Management

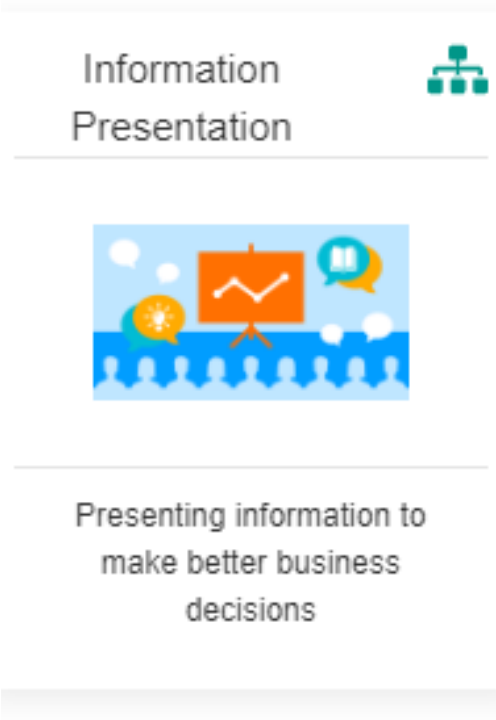
Closed loop methodology

Scorecards and Six Sigma

Definition of Data Visualisation

Dashboard design

Data Visualisation Fundamentals
- Understanding – Audience
- Representation – Charts
- Presentation – Colour etc..



Trends and Future BI

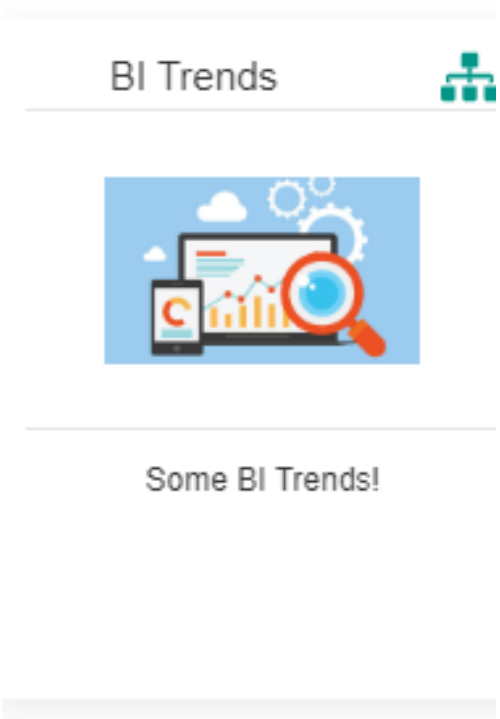
Top 10 Business Intelligence Trends by Tableau

Use of Cloud Computing in Analytics

Location based Analytics

Data Privacy

GDPR’s Impact on BI



Questions about sample questions?