

Assignment 1

Course 10147: Building Services

Font: MS Word text size 10, Arial, Times or Verdana.

Figures in Brackets: (*min-max words, marks*).

References: Harvard style, brief reference followed by details at end in bibliography.

Please write the Question No. clearly on the answer sheet above the answer, do not write the question.

Questions:

1. Comment on the Building Construction Industry in terms of economic and social value to Australia. (200-250, 5)
2. What are Building Services, and describe Building Services Engineering, with a focus on mechanical, electrical, hydraulics and fire? (200-250, 5)
3. Describe the importance of correctly designing, installing and commissioning Building Services for safety, health, comfort and sustainability of buildings and occupants. (150-200, 5)
4. Comment on recent issues related to poor building construction quality and reasons behind the scrutiny on the Building Construction Industry in Australia. Recommend watching *Four Corners*, *60 minutes* and other programmes. (200-250, 5)

<https://www.youtube.com/watch?v=NYzwIrybSjU>
<https://www.youtube.com/watch?v=vRSdiq3sOTc>
<https://www.youtube.com/watch?v=U76w-n8rwhI>
5. Describe the fundamental requirements of the WHS Act 2011 with regards to a duty holder and a PCBU for safe construction. List the 19 high risk construction activities named in WHS 2011. Describe important steps to mitigate risks from the following high-risk construction activities: Working in Confined Spaces. Powered Mobile Plant. Pressurised Gas Mains or Piping. Contaminated or Flammable Atmospheres. Energised Electrical Installations or Services. (400-500, 10)
6. What are the key responsibilities of building services design engineers, installers, and commissioning agents? What do they do? What are the key responsibilities and attributes of a good construction manager? (200-250, 5)
7. Describe Indoor Air Quality (IAQ) and Indoor Environment Quality (IEQ). (200-250, 5)
8. Describe the following: Domestic Hot Water (DHW), Chiller, Boiler, BMS, DDC, Pipe, Valve, Duct, Damper, Actuator, Backflow Prevention, Sub Station, Transformer, Switchboard, Main Switchboard, Utility Company, GPO, Cable, Conduit, Cable Containment System, MCB, MSSB, RCD, Fuse, RPZ Valve, NCC, BCA, NCA, PCA, Luminaire. (5-10 each, 15)