



Answer the following questions

**Question 1**

*(35 marks)*

- (1-a) Discuss the power losses in high cables.  
 (1-b) Write short notes on: Cross-bonding — Copper Space Factor  
 (1-c) What are the required properties of high voltage cables?

**Question 2**

*(35 marks)*

- (2-a) Compare between H and S.L. Cable types.  
 (2-b) Describe the cable grading for uniform stress distribution in high voltage cables considering capacitance and intersheath grading.  
 (2-c) Compare between external pressure, and internal pressure high voltage cables.

**Question 3**

*(30 marks)*

- (3-a) Compare between oil-pressure and gas-pressure high voltage cables.  
 (3-b) Explain the routine and type test in high voltage cables.  
 (3-c) Why the site test is required in high voltage cables?

With my best wishes

*Dr. Amr Abdelhady*

This exam measures the following ILOs

Skills	Knowledge&Understanding Skills				Intellectual Skills			Professional Skills
	a1.1	a1.2	a1.5	a1.3	b1.2	b5.1	b5.3	c4.3
Question Number	1b	1a	2a,b,c	3a,c	3c	1c	2b	3a,b,d