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09ARC4.3

**Fourth Semester B.Arch. Degree Examination, Dec.2015/Jan.2016**  
**Building Services – II**

Time: 3 hrs.

Max. Marks:100

**Note: Answer any THREE full questions from PART-A  
and TWO full questions from PART-B.**

**PART – A**

- 1 a. Briefly explain the various systems of domestic wiring. (12 Marks)  
 b. What is earthing? Why it is done? Explain about pipe earthing. (08 Marks)
- 2 a. What are protective devices and why it is done? What are the main features of a good protective device? (12 Marks)  
 b. What are protective relays? Explain any one with the help of a sketch. (08 Marks)
- 3 Write notes on the following:  
 a. ELCB  
 b. Substation  
 c. Panel Board  
 d. Transformer (20 Marks)
- 4 a. List the general ISI rules related to wiring. (12 Marks)  
 b. Write short notes on:  
 i) Conductor ii) Insulator iii) Ceiling rose iv) Switches (08 Marks)
- 5 Draw the plan of a two bed room house with verandah. Draw the electrical circuit of it. The wiring is to be done in T.R.S system and assume the supply voltage to be 230 V, single phase. The detail of the electrical points is as under. Find total circuit current and short circuiting current.

	Light	Tube	Fan	Plug
Verandah	1			
Room No 1	1	1	1	1
Room No 2	1	1	1	1

Room No 1 5m × 5m	Room No 2 5m × 5m	Verandah 5m × 3m
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(20 Marks)

**PART – B**

- 6 a. What are the laws of illumination? (10 Marks)  
 b. Explain in brief with neat sketches the different types of lighting schemes. (10 Marks)
- 7 Explain any two of the following with neat sketch:  
 a. Incandescent lamp      b. Fluorescent lamp      c. Neon lamp (20 Marks)
- 8 Explain the design consideration and method of lighting the following areas:  
 a. Drawing office      b. Reception room      c. Auditorium      d. Workshop (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
 2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.