

EEL769, MAJOR EXAM, Time 120 mts, Max. Marks - 80

Q1 (a) Briefly explain the working of following ^{electrical} devices: -

(i) any two out of Transformer, Generator and Motor.

(ii) any two devices used in the Construction Industry [2x4=8]

(b) Make a list of 4 main devices located at the substation and identify their work. [2x4=8]

Q2 (a) Find the difference between any three of the following: = (24) [4x2=8]

(i) distributor and feeder (ii) 1-Ph induction motor and 3-Ph induction motor

(iii) Underground Cable and Overhead lines

(iv) Aluminium and Copper Conductors

(v) electric shock caused by ac and dc. [3x4=12]

(b) How following motors are started [Give One Method Only]: -

(i) dc motor (ii) Synchronous Motor (iii) 1-Ph induction Motor

Q3 Explain the reason behind any 3 of the following: (18) [2x3=6]

(i) why higher voltage of transmission are chosen?

(ii) why series motors are not started without any load?

(iii) why power-factor should be improved?

(iv) why electric system is grounded?

(v) why Energy Audit is recommended? [3x4=12]

Q4 Explain the function of any three of following: (12)

(i) GFCI (ii) Commutator (iii) armature reaction

(iv) SF6 circuit Breaker (v) Pump storage Plant. [3x4=12]

Q5 Consider the main Building of IIT-Delhi and answer the following: -

(a) identify two electrical system that are used in the building and explain the working of one of them. [2+3=5]

(b) suggest three steps that you may like to take to reduce the energy bill of this building. [3x3=9]

Q6 (Extra - beyond Max. Marks)

Give your comment on 'Green Building' - [02] Extra