

**April 2019**

Time - Three hours  
(Maximum Marks: 75)

- (N.B: (1) Q.No. 8 in PART - A and Q.No. 16 in PART - B are compulsory. Answer any FOUR questions from the remaining in each PART - A and PART - B  
(2) Answer division (a) or division (b) of each question in PART - C.  
(3) Each question carries 2 marks in PART - A, 3 marks in Part - B and 10 marks in PART - C.]

PART - A

1. Differentiate one way switch and two way switch.
2. Define luminous flux.
3. What is meant by renewable energy? Name the various types.
4. State any two advantages of fossil fuels.
5. What is meant by self cleansing velocity of sewer?
6. Define building automation.
7. What is meant by daylight factor? What are its components?
8. Why security system is necessary in residential buildings?

PART - B

9. Which type of fuse is used in a residential building? Explain.
10. Why artificial lighting is necessary in buildings?
11. Enumerate the principles of good lighting.
12. What are the advantages of geothermal energy?
13. Why vent pipe is provided in a house drainage system?
14. State the use of hidden camera.
15. What are the functions of building management system?
16. State the necessity of using renewable energy.

[Turn over.....

PART - C

17. (a) Define the following and state their uses (i)Circuit breaker (ii)Change over switch (iii)Substation transformer (iv)Bus bar (v)Exhaust fan.

(Or)

- (b) Explain the usage of generators and inverters in buildings.

18. (a) Write short notes on (i)Requirements of good lighting (ii)Levels of illumination for different functions.

(Or)

- (b) Enumerate the general principles to be followed in buildings to provide openings to afford good natural lighting.

19. (a) Define wind energy. Explain the working of a wind mill with a neat sketch.

(Or)

- (b) Explain the usage of solar energy with sketches.

20. (a) Explain in detail the various methods of garbage disposal.

(Or)

- (b) Differentiate the following (i)Garbage and refuse (ii)Sewage and sullage (iii)Sewer and inlet (iv)Trap and manhole.

21. (a) Explain the use of access control system in a building with a neat sketch.

(Or)

- (b) Explain the different types of CCTV cameras.

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