

779**April 2018**

*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. What is meant by two way switch? Where it is provided?
2. Define circuit breaker. What is its use?
3. What is meant by daylight penetration?
4. Why artificial lighting is necessary in buildings?
5. What is the use of wind machine?
6. Differentiate sewage and sullage.
7. Why security system is necessary in a residence?
8. What is meant by biomass and biomass energy?

PART – B

9. Write short notes on generation of electricity.
10. Write short notes on exhaust fan.
11. What are the points to be considered while designing a lighting installation?
12. Write any three characteristics of renewable energy sources.
13. Enumerate the advantages of biomass over fossil fuels.
14. What are the disadvantages of open drains?
15. Expand CCTV camera. What are its uses?
16. Enumerate the aims of good lighting.

[Turn over.....

PART - C

17. (a) Explain the different types of fuses with sketches.
(Or)
(b) Name the different types of wiring. Explain any three types with neat sketches.
18. (a) (i) Define the following: (1)Lux (2)Candela (3)Luminous flux.
(ii) What are the requirements of good lighting?
(Or)
(b) What is energy efficient lighting? Explain with sketches.
19. (a) Explain the following with neat sketches: (i)Solar pump (ii)Solar light.
(Or)
(b) What is meant by geothermal energy? Explain. Enumerate its merits and demerits.
20. (a) Why ventilation of sewer is necessary? Explain the various methods of ventilation of sewers.
(Or)
(b) With the help of flow diagram, explain the activated sludge process.
21. (a) Explain with sketches the access control and perimeter protection systems.
(Or)
(b) Explain different types of CCTV cameras.
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