

KATHMANDU UNIVERSITY  
End Semester Examination  
March/April, 2017

Marks Scored:

Level : B. E.

Course : EPEG 416

Year : IV

Semester : I

Exam Roll No. :

Time: 30 mins

F. M. : 10

Registration No.:

Date

APR 10 2017

SECTION "A"

[20Q × 0.5 = 10 marks]

Choose the most appropriate answer for the following questions.

1. Illumination of one lumen per sq. meter is called .....  
(a) lux                      (b) candela                      (c) lumen meter                      (d) foot candle
2. .... is a Cold cathode lamp.  
(a) Fluorescent Lamp                      (b) Sodium vapour lamp  
(c) Mercury Iodide lamp                      (d) Neon lamp
3. Load diversity is always taken as .....  
(a) 1                      (b)  $\geq 1$                       (c) 0                      (d)  $\leq 1$
4. On the basis of thumb rule for air conditioner 1.5 ton cooling is equals to .....  
(a) 15000 Btu                      (b) 12000 Btu                      (c) 18000 Btu                      (d) 8000 Btu
5. The life time for solar PV system is.....  
(a) 10 to 20 years                      (b) 20 to 30 years                      (c) 30 to 40 years                      (d)  $> 40$  years
6. As per National Building code, the minimum size of cable for power circuit shall be.....  
(a)  $2 \times 7/22 + 1/18$                       (b)  $2 \times 20 + 1/18$                       (c)  $2 \times 2.5 + 1.0$  sq.mm                      (d)  $2 \times 4 + 2.5$  sq.mm
7. The applied dc voltage for Meggering is.....  
(a) Equal to working voltage                      (b)  $\geq 2$  of working voltage  
(c) 0.5 of working voltage                      (d) very high
8. Nominal cell voltage of Lead acid battery is.....  
(a) 2.0                      (b) 1.2V                      (c) 4.1V                      (d) 3.7V
9. The value of earthing resistance unless otherwise specified shall be assumed as.....  
(a) 1 ohm                      (b) 3 ohm                      (c) 10 ohm                      (d) 5 ohm
10. What type of wiring connection is generally applied for electrification in Nepal?  
(a) Parallel connection                      (b) Junction wiring  
(c) Series connection                      (d) Loop wiring
11. For distribution system, the voltage drop in the selected cable is not more than..... of the nominal supply voltage.  
(a) 1.5%                      (b) 2.5%                      (c) 5%                      (d) 10%

12. What is the maximum numbers of 2.5 sq.mm cable in 20 mm conduit size.....  
(a) 5 (b) 6 (c) 7 (d) 8
13. Maximum operating pressure of water tube boiler has been under.....  
(a) 16 bar (b) 66 bar (c) 80 bar (d) 100 bar
14. Which is not the type of cross drum boiler?  
(a) Single drum type (b) Two drum type (c) Three drum type (d) Four drum type
15. Which type of load curve is not needed for load forecasting?  
(a) Daily load curve (b) Monthly load curve  
(c) Quarterly load curve (d) Yearly load curve
16. Approximately ..... times the heat output by Finned tube heat exchanger in comparison to Black steel pipe heat exchangers.  
(a) 3 (b) 5 (c) 7 (d) 10
17. An escalator of 30degree, 2 passengers per step, a speed of 0.5 m/s and 400mm tread. What will be the numbers of people moved per hour?  
(a) 6897 (b) 7794 (c) 8895 (d) 9996
18. Which is not been used by PLC for automation?  
(a) "C" language (b) Ladder diagram (c) Grafcet (d) Boolean
19. For Nepal the yearly average insolation can be taken around.....Wh/m<sup>2</sup>/day  
(a) 2000 to 2500 (b) 2500 to 3500 (c) 3500 to 4500 (d) 4500 to 5500
20. When a fluorescent lamp is to be operated on dc which of the following additional devices must be incorporated in the circuit?  
(a) Resistance (b) Transformer  
(c) Inductance (d) Condenser