



Republic of the Philippines

POLYTECHNIC UNIVERSITY OF THE PHILIPPINES INSTITUTE OF TECHNOLOGY

Engineering Technology Department

Philippine Electrical Code Midterm Examination

Name: _____ Score: _____
Course & Section: _____ Date: **1 - 12 - 2023** Professor: **A.M. David**

Encircle the letter of the correct answer.

1. The demand factor for a continuous load is

- a. 65 % b. 80 % c. 85 % **d. NA**

2. No. 2.0 mm² THW wire is a?

- a. **Stranded wire** b. Duplex wire c. Solid wire d. NA

3. 1.6mm TW wire is same as?

- a. 2.0mm TW b. 305mm² **c. 2.00mm² TW** d. NA

4. 15 ampere Circuits initial load/Circuit should not exceed _____ watts/circuits.

- a. 1,000W **b. 2,000W** c. 100W d. NA

5. PEC means Philippine _____

- a. Electronics Circuit **b. Electrical Code** c. Electrical Circuit d. NA

6. Minimum size of solid wire use in convenience outlet circuit.

- a. **3.5mm** b. 2.0mm c. 1.6mm d. NA

7. VA is the same as?

- a. Powerhouse b. Capacitor **c. Watts** d. NA

8. RA 184 is known as?

- a. EE Law **b. The Old Engineering Law** c. The New EE Law d. NA

9. 1hp ACU, 230V has a current capacity of?

- a. **8 A** b. 9 A c. 6.9 A d. NA

10. The minimum size of wire for special outlet.



Republic of the Philippines

POLYTECHNIC UNIVERSITY OF THE PHILIPPINES INSTITUTE OF TECHNOLOGY

Engineering Technology Department

- a. 5.0mm² b. 5.5mm² c. 3.5mm² TW d. NA
11. The grade of Master Electrician under RA 184 was superseded by _____ in RA 7920
a. Reg. Master b. Reg. Master Electrician c. Reg. Electrician d. NA
12. The New Electrical Engineering Law is known as?
a. RA 184 b. RA 7240 c. RA 7920 d. NA
13. Through the years, the _____ has been an active partner of the IIEE in the Promotion of safety...
a. ACMEEE b. ACMEE c. ACEMEE d. NA
14. PEC is intended for the exclusive use of?
a. PEE b. RME c. PEE, REE & RME d. NA
15. The PEC does cover the following.
a. Public/Private Buildings b. Aircraft/Automobile Vehicles c. Aircraft d. NA
16. PEC does not cover the following.
a. Automobile vehicles b. watercrafts c. aircraft d. NA
17. A load where the maximum current is expected to continue for 3 hrs. or more
a. controller b. non-continuous load c. continuous load d. NA
18. TW means?
a. Heat/water thermoplastic b. thermoplastic wire c. moisture- resistant d. NA
19. Trade name of wire which is applicable only in dry location
a. THNN b. THWN c. THWN-2 d. NA
20. THW ambient temperature is?
a. 50°C b. 60°C c. 75°C d. NA
21. Grounding wire should be colored?
a. white b. green c. black d. NA
22. 15,20,25,30,35 Circuit breaker ampere rating has an ampere frame of?



Republic of the Philippines

POLYTECHNIC UNIVERSITY OF THE PHILIPPINES INSTITUTE OF TECHNOLOGY

Engineering Technology Department

- a. 100 AF **b. 40AF** c. 125 AF d. NA
23. An ACU with $\frac{1}{2}$ HP 230 V, rating has a current rating of
a. 9A b. 4A c. 8A **d. NA**
24. The general lighting loads multiplier for dwelling units is.
a. 24 VA/ sq.m b. 18 VA/ sq.m c. 16 VA/ sq.m **d. NA**
25. Minimum size of wire for convenience outlet
a. 3.5 mm² b. 3.5 mm c. 5.5mm² d. NA
26. Minimum ampere rating for lighting outlet?
a. 10 AT b. 15 AT **c. 20 AT** d. NA
27. Demand factor use to get the VA for Lighting outlet circuit.
a. 100VA b. 200 VA c. 150 VA **d. NA**
28. Part of Electrical Plan that show all electrical symbols being used in design and lay-out.
a. Legend b. Riser Diagram c. Location Plan d. NA
29. Conductor sizes in V the latest PEC are expressed in
a. AWG b. square millimeter c. diameter d. NA
30. Demand factor use to get the VA for Convenience outlet circuit.
a. 100 VA b. 200 VA c. 250 VA **d. NA**
31. V_T in parallel circuit is
a. $V_T = V_1 + V_2$ b. $V_T = I_T R_T$ **c. $V_T = V_1 = V_2$** d. NA
32. In parallel Circuit if $V_2 = 220V$, what is your V_T ?
a. $I_T R_T$ b. P_T / I_T c. 210V **d. NA**
33. In series circuit if there is a failure in any one unit what will be the result?
a. one unit is busted b. blinkering lights **c. kills the entire circuit** d. NA
34. which formula the best represent ohm's Law?
a. $V = I R$ **b. $I = V/R$** c. $R = V/I$ d. NA



Republic of the Philippines

POLYTECHNIC UNIVERSITY OF THE PHILIPPINES INSTITUTE OF TECHNOLOGY

Engineering Technology Department

35. Find R_T for three $47\ \Omega$ resistances in parallel.

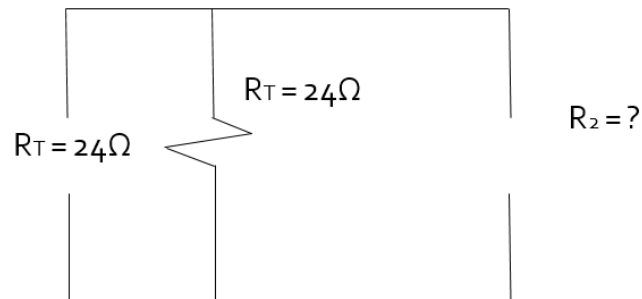
a. $15.6\ \Omega$

b. $16.5\ \Omega$

c. $14.6\ \Omega$

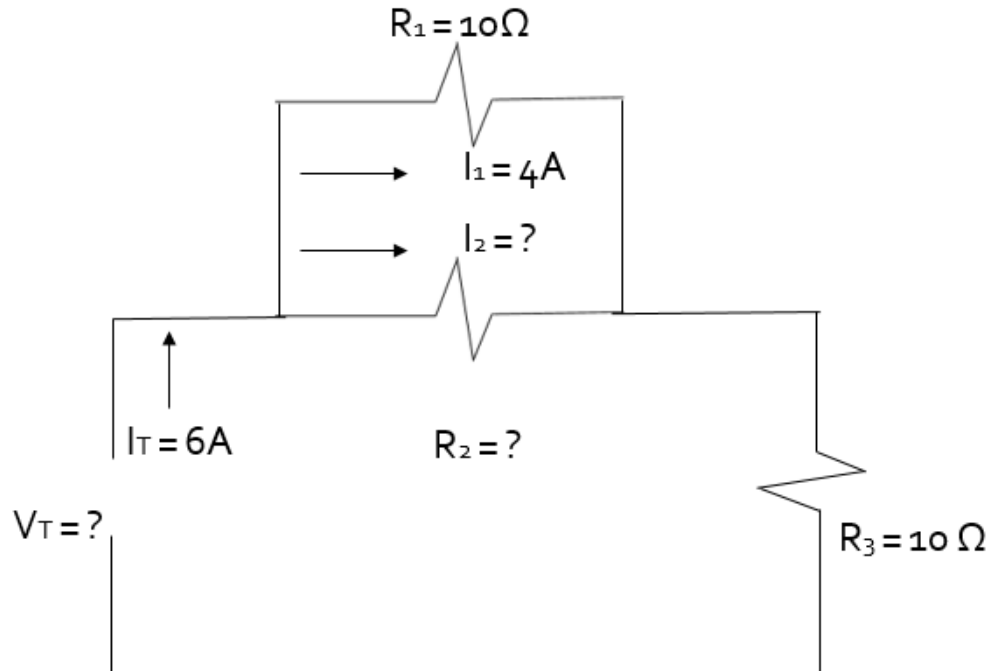
d. NA

II. 36-40. Problem Solving



Find: R_2

41-60.



Find: $R_2, I_2, V_T, V_1, V_2, V_3, P_T, P_2, P_3, P_T$