



Fig. 18

21. Refer to Fig. 18. The sine expression for e_1 is
- (1) $10 \sin(\omega t + 50^\circ)$ (3) $10 \sin(\omega t - 100^\circ)$
 (2) $10 \sin(\omega t + 100^\circ)$ (4) $10 \sin(\omega t - 50^\circ)$
22. The equivalent cosine expression for e_1 of Fig. 18 is
- (1) $-10 \cos(\omega t + 50^\circ)$ (3) $-10 \cos(\omega t - 50^\circ)$
 (2) $-10 \cos(\omega t + 40^\circ)$ (4) $-10 \cos(\omega t - 40^\circ)$
23. The sine expression for e_2 in Fig. 18 is
- (1) $5 \sin(\omega t + 50^\circ)$ (3) $5 \sin(\omega t - 100^\circ)$
 (2) $5 \sin(\omega t + 100^\circ)$ (4) $5 \sin(\omega t - 50^\circ)$
24. The equivalent cosine expression for e_2 of Fig. 18 is
- (1) $-5 \cos(\omega t + 50^\circ)$ (3) $-5 \cos(\omega t - 100^\circ)$
 (2) $-5 \cos(\omega t - 180^\circ)$ (4) $-5 \cos(\omega t + 140^\circ)$
25. Refer to Questions 21 and 23. Given that $e_3 = e_1 + e_2$, e_3 is equal to
- (1) $3.83 \sin \omega t - 9.64 \cos \omega t$ (3) $3.83 \sin \omega t + 9.64 \cos \omega t$
 (2) $9.64 \sin \omega t - 3.83 \cos \omega t$ (4) $9.64 \sin \omega t + 3.83 \cos \omega t$
26. Refer to Question-25. Find the difference between e_1 and e_2 .
- (1) $3.21 \sin \omega t - 11.49 \cos \omega t$
 (2) $9.64 \sin \omega t - 3.83 \cos \omega t$
 (3) $3.22 \sin \omega t - 9.64 \cos \omega t$
 (4) $3.22 \sin \omega t + 11.49 \cos \omega t$