

CHAPTER 1 BLM ANSWER KEY

BLM 1-1: Working with Molecular Shape and Polarity

Answers

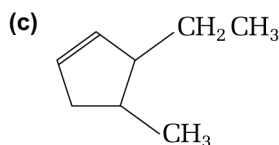
Assess students' knowledge of organic compounds.

Molecule	Structural diagram	Shape name	Bond angle	Polar or non-polar
Cl ₄		tetrahedral	109.5°	non-polar
CH ₃ F		tetrahedral	109.5°	polar
HC(O)CH ₃		trigonal planar	120°	polar
CHBr ₃		tetrahedral	109.5°	polar
CS ₂	S=C=S	linear	180°	non-polar
C ₂ HF	H-C≡C-F	linear	180°	polar
CHFCIBr		tetrahedral	109.5°	polar
C ₂ H ₃ I		trigonal planar	120°	polar

BLM 1-2: Aliphatic Hydrocarbons Quiz

Answers

- (a) pentane
(b) 3,3-dimethylhexane
- (a) 3-nonene
(b) 3-methyl-1-butene
- (a) 1-octyne
(b) 5-ethyl-3,4,6-trimethyl-1-heptyne
- (a) cyclopentane
(b) 3-methylcyclohexene
- (a) CH₃—CH₂—CH₂—CH₂—CH₂—CH₃
(b) CH₃—CH=CH—CH₂—CH₂—CH₂—CH₂—CH₃

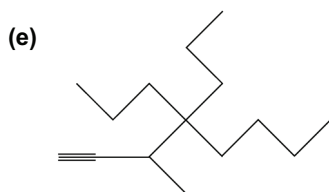
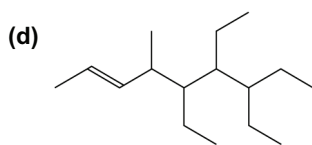
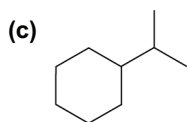
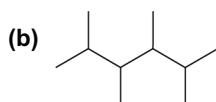
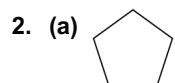
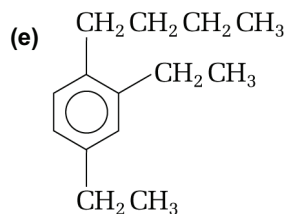
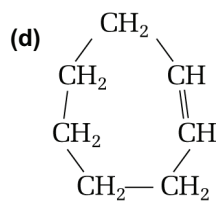


BLM 1-3: Naming and Drawing Hydrocarbons

Answers

- (a)
- (b)
- (c)

CHAPTER 1 BLM ANSWER KEY



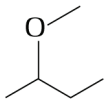
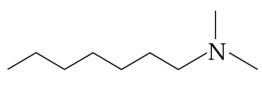
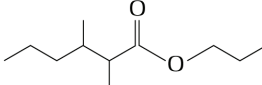
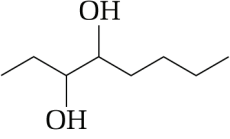
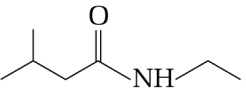
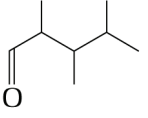
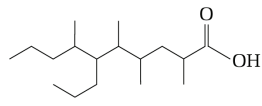
3. (a) 1,4-diethylbenzene
 (b) 3-heptene
 (c) 2-methylhexane
 (d) 3-ethyl-2,4-dimethyloctane
 (e) 3-ethyl-2-methyl-2-hexene
 (f) 3,3-diethyl-1-pentyne

BLM 1-4: Naming and Drawing Organic Compounds

Answers

Compound	Structural diagram	Hydrogen bonding (yes/no)
3-ethyl-2-pentanol		yes
heptanamine		yes
hexanal		no
propanone		no
pentanoic acid		yes
ethylbutanoate		no
hexanamide		yes
3-methyl-2-pentanone		no
2-methyl-2-propanol		yes

CHAPTER 1 BLM ANSWER KEY

Compound	Structural diagram	Hydrogen bonding (yes/no)
2-methoxybutane		no
N,N-dimethylheptanamine		no
propyl 2,3-dimethylhexanoate		no
3,4-octanediol		yes
N-ethyl-3-methylbutanamide		yes
2,3,4-trimethylpentanal		no
6-propyl-2,4,5,7-tetramethyldecanoic acid		yes

2. (a) propanoic acid (b) 2-heptanone
 (c) ethanamide (d) 2-methyl-1-butanol
 (e) 2,2-dimethyl-1-butanamine
 (f) ethoxybutane (g) propyl methanoate
 (h) 3-methylpentanal

BLM 1-5: Organic Compounds Test

Answers

- | | |
|---------|---------|
| 1. (b) | 14. (c) |
| 2. (a) | 15. (c) |
| 3. (c) | 16. (e) |
| 4. (c) | 17. (e) |
| 5. (b) | 18. (c) |
| 6. (b) | 19. (e) |
| 7. (e) | 20. (b) |
| 8. (c) | 21. (d) |
| 9. (d) | 22. (a) |
| 10. (c) | 23. (a) |
| 11. (c) | 24. (a) |
| 12. (d) | 25. (d) |
| 13. (d) | |