

FUNDAMENTALS OF VOICE & DATA CABLING

CHAPTER 10 STUDY GUIDE

1. Where should cables be labeled? When is considered the best time to label cables?

during rough-in, 1 m for each end all the way down the cable

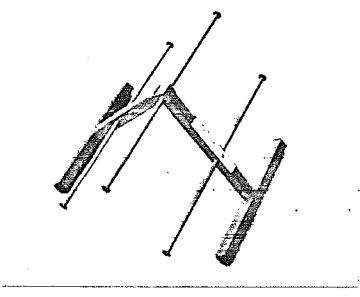
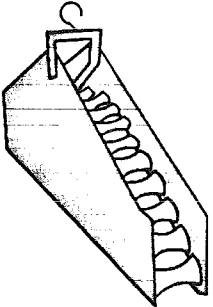
- both ends, before you pull & before you cut

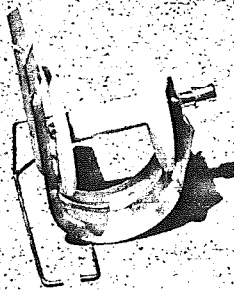
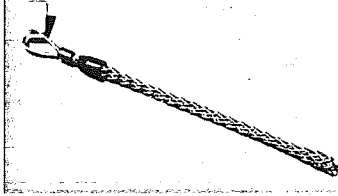

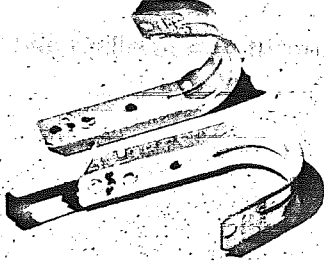
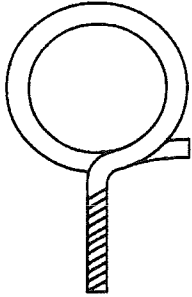
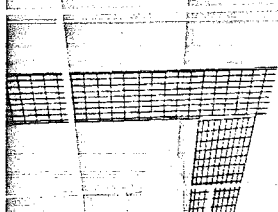
2. Name some safety measures that should be taken when installing cable in an existing building where other workers are?

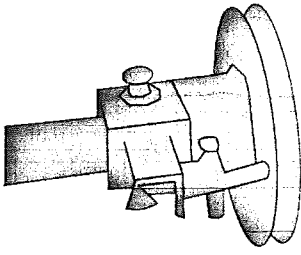
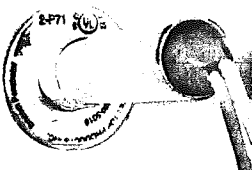
3. What is the staging area? Where should it be located?

area where the installation operation is based

4. Identify the cabling tools/items below and briefly describe each one:

Tool	Name	Description
	<i>cable tree</i>	<i>supports a # of small reels of cable pulls multiple runs</i>
	<i>quadrant block</i>	<i>helps make cable turns more than 90° used for heavy backbone cabling guides cables to T/R</i>

	pulley	prevents cable from dragging on surface that could damage the cable sheath
	wire mesh (Kellom grip)	attached to end of cable so that a pulling eye can be tied to the end of the cable (chinese finger trap)
	accessory	channels that contain cables in an installation, include conduit, cable trays or ladder racks, and plastic or metal insulated accessories
	j-hook	fasten cables
	bridge ring exp. bolt	fasten cables
	cable tray	

	<p>reel brake</p>	<p>controls rotation speed of the reel helps lower cables</p>
	<p>mechanical fire stop</p>	<p>used in conduit or floor above applications</p>

5. What is a bullwheel used for?

large diameter pulley that is used in a mechanical cable pulling process
- pulling at large radius turns

6. What is a "pull check"?

to see what cable goes where

7. When pulling cables across ceilings and through walls, how should the cable be positioned?

parallel to walls
never diagonal
most direct path
don't leave cable on ceiling tiles

8. List the steps you should go through to pull cable from the staging area to the work area:

- tiles are removed
- permanent fasteners are mounted every meter
- multiple reels of cable on a cable tree are put in place
- pull rope is put in place
- a meter of cable is pulled from each of the reels
- each of the cable ends are labeled and a temporary label is attached to each reel
- cable bundle is now pulled from the far end

- 9. What are the generally accepted practices for conduit runs?

should never be filled more than 40%

length of run & 90° angles must be considered

two 90° angle

6x bend radius of conduit diameter

no more than 30m without pull box

10. What tool is inserted into an outlet box and used to push up through conduit/raceway or behind the wall to the ceiling in order to pull cable to the box?

fish tape

11. Why wouldn't you want to fasten data cables to electrical cables? To water pipes?

EMI / RFI

shock hazards

12. What type of cable is usually thought of as "riser" cable?

CMR

13. List some precautions that should be followed when running vertical copper cabling:

grounding must be secured properly & pull rope is good condition

- reel brake should be used when lowering cable

- don't damage sheath of cable

- 14. What is a "service coil"? What type of cable normally has a service coil?

- 15. When using a swivel to pull large fiber optic cable, what is the maximum pulling load?

16. What is another name for self-supporting aerial cable?

figure 8

17. What should be done to outside cables to ensure lightning protection?

grounded, if electrical outlets don't come in to a building

18. What is the maximum distance an outside plant cable should come inside a building?

15 m (50 ft)

19. Why is plenum rated cable required for plenum areas?

so toxic gases aren't released throughout the building

20. What is the order of cable, from least fire conducive to most?

General least

Plenum

• Riser most

21. What does the UL rating of CMP mean? What is the difference between CMP and CM cables?

CM is general purpose, CMP is plenum

22. If a cable is pulled through a firewall, what must you do in order to maintain the integrity of the firewall?

use firestop

23. What are the types of firestops and what is each made from?

electromechanical - flexible wires held

mechanical - used in conduit

concentric - dry powder mixed with water, used with masonry

• intumescent - expand when heated

24. What does "cutting over" mean?

transferring existing services to a new cable system

25. If there is existing data cable in conduits, what is a good way to run new cable down the same piece of conduit?

tie the new cable to the old cable and pull it