

TESSO Cabler Register
Two-Yearly Current Competency Examination – Customer Access Networks

Notes to Candidates:

1. A minimum of 80% of the questions in this examination must be answered correctly in order to pass the examination.
2. Correct answers are to be indicated by circling the letter to the side of the desired answer. The declarations at the end of the paper must be signed for this examination paper to be considered by TESSO.
3. The appropriate reference for the distances and separations referred to in **questions 1 and 2** is the NZ Electrical Code of Practice for electrical safe distances, reference number NZECP 34:2001 ISSN 01140663. The appropriate reference for the distances and separations referred to in **questions 3 and 4** is the Cable Separations Guide (Issue 1 March 2003); the Cable Separations Guide can be downloaded free from the NZCCPTS website at www.nzccpts.co.nz.

Examination Questions:

1. What is the aerial minimum approach distance (wire-to-wire clearance) from low voltage power and Telecommunication cables?
 - A. 400mm
 - B. 600mm
 - C. 650mm
 - D. 700mm
2. What is your personnel clearance from a low voltage phase wire in good condition?
 - A. 50mm
 - B. 100mm
 - C. 150mm
 - D. 200mm
3. What is the minimum clearance from neutral screened underground power cables and Telecommunication cables with special protection?
 - A. 50mm
 - B. 60mm
 - C. 100mm
 - D. 150mm
4. If the power cable was not neutral screened or armoured, what would the minimum parallel separation be?
 - A. 300mm
 - B. 400mm
 - C. 450mm
 - D. 500mm

Table 1

Black	=	BK	Blue	=	BL
Brown	=	BN	Green	=	G
Orange	=	O	Red	=	R
Slate	=	S	Violet	=	V
White	=	W	Yellow	=	Y

5. In the following example circle the **incorrect** colour listed for pair 11:

Binder Pairs	Binder	A leg	B leg	Binder	A leg	B leg
11	BL	BK	BL	O	W	O
Cable	25 pair group			10 pair group		

6. Using the above Table 1 fill in the gaps in the table below (as per 5 above). *This question is worth 5 marks.*

Binder / Pairs	Binder	A leg	B leg	Binder	A leg	B leg
6						
9						
12						
13						
15						
Cable	25 pair group			10 pair group		

7. Using the above Table 1 fill in the gaps in the table below (as per 5 above). *This question is worth 5 marks.*

Binder / Pairs	Binder	A leg	B leg	Binder	A leg	B leg
16						
19						
22						
33						
45						
Cable	25 pair group			10 pair group		

8. Using the above Table 1 fill in the gaps in the table below (as per 5 above). *This question is worth 5 marks.*

Binder / Pairs	Binder	A leg	B leg	Binder	A leg	B leg
8						
10						
25						
37						
41						
Cable	25 pair group			10 pair group		

9. In Cable types, what does PEFUT stand for?
A. Plastic extruded filled unit twin
B. Plastic extruded folded unit twin
10. When jointing a 50 pair 0.63 wire diameter paper cable [CPUB] what colour AMP Picabond connector could you use?
A. Blue
B. Green
C. Yellow
D. White
11. When closing a joint with a sleeve diameter of 70mm, how many silica gel packets are should be used around the joint?
A. 2
B. 4
C. 6
D. none
- If you have circled D, which of the following cables would you be using?
A. PEFUT
B. CPUB
12. In 25 pair-group PEFUT cables what colour is pair 53?
A. Green binder, WH/BN
B. Orange binder, WH/OR
C. Orange binder, WH/SL
D. Green binder, WH/GN
13. In 25 pair-group PEFUT cables what colour is the unit binder for pair 76?
A. Brown
B. Green
C. Slate
D. Blue
14. Are poles carrying power push tested?
A. No
B. Yes
15. Is CRC, or similar, type water/corrosion inhibitor repellent suitable for use to remove dampness from roadside cabinets?
A. No
B. Yes
16. Which of the following functions relating to earthing of building frames is **incorrect**:
A. To minimise a.c. electrical induction
B. To minimise noise interference
C. To protect staff and equipment from voltage surges
D. To improve the mechanical strength of the frame.

17. In the following statements, concerning causes of losses in optical fibre cabling systems, which is the most accurate?
- A. Mismatched fibre cores
 - B. Surface scratches
 - C. Dirt and/or debris
 - D. All of the above
18. Single mode and multi mode patch cords are often differentiated by the jacket colour of the cord.
- Single mode** is most commonly coloured: (circle one of the following)
- Brown Orange Yellow
- Multi mode** is most commonly coloured: (circle one of the following)
- Brown Orange Yellow
19. Single mode laser light (Class IV) at 1310 nanometre and 1550 nanometre is:
- A. Visible to the eye and safe to look at.
 - B. Invisible to the eye and safe to look at.
 - C. Visible to the eye and unsafe to look at.
 - D. Invisible to the eye and unsafe to look at.
20. Single mode optical fibre may be joined by several methods; which one should produce the lowest loss:
- A. Mechanical splicing
 - B. 2 connectors mated in an adapter (coupler)
 - C. Fusion splicing
 - D. Soldering
21. Which test equipment should be used to directly measure the amount of light loss in an optical fibre link?
- A. Optical Time Domain Reflectometer (OTDR)
 - B. Power Meter and Light Source (OLTS)
 - C. Continuity Tester
 - D. Inspection Scope
22. The ends of single mode optical fibres should be managed prior to termination, to protect against the possibility of high power light being a hazard and danger to people's eyes.
- The best method of management is:
- A. Pointing the fibre downwards so light exits the fibre to the floor
 - B. Covering the fibre end with a dark coloured cap or cover
 - C. Cleaving the fibre so the end face is not jagged or non uniform
 - D. Coiling the fibre in tight bends so that the light is attenuated to a safe level

23. Which two of the following statements are true with regard to single mode optical fibre cable:
1. Is low loss, enabling transmission links of 10's of kilometres or greater.
 2. Is immune to electromagnetic interference.
 3. Needs to be buried or covered to stop ambient light leaking into the fibre.
 4. Although cheaper than copper cable, it cannot carry as much information as a similar pair of copper wires.

The following questions are all based on the content of Unit Standard 17396 version 4, "Demonstrate knowledge of safe working practices in telecommunications", available from the New Zealand Qualifications Authority website <http://www.nzqa.govt.nz>, and all must be answered correctly.

24. Does the definition of *Associated equipment* in special note 3 include three, five or all (circle one of the underlined options) of the following eight items: insulating gloves, screens, stands, mats, boots and protective covers; safety belts; ladders; ropes for pole top rescue.
25. Which performance criteria refers to "documented enterprise procedures" for evacuation procedures:
- A. 2.2
 - B. 3.2
 - C. 4.1
 - D. 6.2
26. Which element requires a demonstration of knowledge with respect to the safe use of hand and portable electric tools:
- A. 1
 - B. 3
 - C. 4
 - D. 5
27. Which performance criteria includes a "Range" statement referring to the use of "non wire-reinforced wooden or fiberglass stile ladders":
- A. 1.3
 - B. 3.3
 - C. 5.1
 - D. 6.1
28. Which element requires a demonstration of knowledge with respect to fire prevention and control procedures:
- A. 2
 - B. 3
 - C. 5
 - D. 7

29. Which performance criteria includes a “Range” statement referring to “contact between telecommunications drop wires and power lines”:
A. 5.2
B. 9.2
C. 9.4
D. 10.2
30. Which element requires a demonstration of knowledge with respect to the reporting of electrical accidents:
A. 7
B. 8
C. 10
D. 11
31. Does performance criteria 8.1 refer to “hazardous substances likely to be encountered...”
A. True
B. False

DECLARATIONS

1. I hereby declare that I have personally completed this examination paper:

Name (print):Signed:Date:

2. I hereby confirm that (print): personally completed this examination paper:

Name (print): Position:Signed: Date: