1. Fill the numbers of correct statements concerning optical networks in the following simple table.

An optical network using Dense Wavelength Division Multiplexing can include (among others):

1 – Fabry-Perot LASERs
2 – Cooled Distributed Feedback LASERs
3 – Single Mode Fibres
4 – EDFA amplifiers
5 – Semiconductor Optical Amplifiers
6 – Dispersion compensating Fibres
7 – Optical splitters
8 – Optical Time Domain Reflectometers
9 – Optical cleavers
10 – Array Waveguide Gratings

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2. Tick the boxes referring to correct claims concerning lasers and optical amplifiers.

- ☐ The width of a spectral line of used LASERs is negligible in DWDM.
- ☐ Temperature stability of LASERs is negligible in CWDM.
- ☐ DFB lasers work on the principle of stimulated emission of radiation.
- ☐ DFB lasers work on the principle of spontaneous emission of radiation.
- ☐ SOA gain increases with temperature of a chip.
- ☐ EDFA works on the principle of spontaneous emission of radiation.
- ☐ EDFA requires a pump operating at the wavelength of 980 nm.
- ☐ EDFA gain is about 30 – 50 dB.
- ☐ Raman amplifier produces gain at the wavelength shifted by about 100 nm from the pump's wavelength.
- ☐ Raman gain can be produced in Dispersion Compensating Fibres.

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3. Assign the terms from the left column to the corresponding definitions on the right.

FTTEx	Optical fibres are terminated at the local telephone exchange, DSLAM splits signal to existing metallic lines to provide xDSL
FTTCab	Optical fibre reaches the group of buildings
FTTC	Optical fibres reach particular buildings, where they can be terminated
FTTB	Optical fibres are terminated at the end user's socket
FTTO	Optical fibres are terminated in a outdoor splitter
FTTH	Optical fibres terminate at the office of customers with huge demands on the transmission rate

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