

1996年 香港中學會考化學科(卷一) 問題5 (篇章式參考答案 – 附圖式結構分析)

語體：因素解說

傳意功能：解釋由於多個不同因素而發生或出現的事物。

圖式結構：指令 ^ 現象確認 ^ {因素 ^ 闡釋} ↓

圖式結構	語篇	語言特色
(現象確認)	吸煙危害健康，因為香煙的煙霧中包含一氧化碳、焦油、尼古丁和碳微粒四種物質，詳述如下：	<p>陳述句「吸煙危害健康，因為香煙的煙霧中包含一氧化碳、焦油、尼古丁和碳微粒四種物質」回應指令並確定題目要求解釋的現象。</p> <p>因果連詞「因為」帶出香煙煙霧所含各物質可危害健康。</p> <p>關係過程「如下」把焦點移至下文，解釋香煙煙霧所含各物質對健康的影響。</p>
因素 ^ 闡釋	首先，一氧化碳是一種有毒的氣體，能與血紅蛋白結合，減低紅血球的帶氧能力。	時間連詞「首先」及添加連詞「另外」、「再者」和「此外」銜接各因素，令答案結構更緊密。
因素 ^ 闡釋	另外，焦油是懷疑致癌物質，可引致支氣管發炎，並損害肺部組織。	關係過程「是」和「含有」帶出所闡述的物質的相關特性。
因素 ^ 闡釋	再者，尼古丁不但有毒，更會令人上癮和造成血管萎縮，使肺部及心臟負荷過重，引致胃潰瘍，並擾亂神經系統。	情態詞「能」、「可」和「會」表示列舉的

<p>因素 ^ 闡釋</p>	<p>此外，碳微粒含有致癌物質，更會破壞呼吸系統。</p>	<p>物質危害健康的可能性。</p> <p>添加連詞「並」及「更」帶出有害物質對健康進一步的影響。</p> <p>物質過程「使」、「令」、「造成」及「引致」闡釋各種有害物質對健康的影響並引出它們的因果關係。</p> <p>物質過程「減低」、「損害」、「上癮」、「負荷過重」、「擾亂」和「破壞」闡述各列舉的物質對健康的影響。</p>
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1996 HKCEE Chemistry (Paper I) Question 5 (Running answer text – with schematic structure)

Genre: Factorial Explanation

Communicative Function: To explain events for which there are a number of simultaneously occurring causes.

Schematic Structure: Direction ^ Phenomenon Identification ^ {Factor ^ Elaboration} ↓

Schematic Structure	Text	Linguistic Features
(Phenomenon Identification)	Cigarette smoking is hazardous to health because cigarette smoke contains carbon monoxide, tar, nicotine and particulates. Detailed explanations are as follows:	Declarative mood ‘Cigarette smoking is hazardous to health because cigarette smoke contains carbon monoxide, tar, nicotine and particulates’ echoes the direction and identifies the phenomenon to be explained in the answer. Causal conjunction ‘because’ brings out the fact that cigarette smoke contains substances which are hazardous to health. Relational process ‘are’ directs attention to the answer text in which the effects of the substances present in cigarette smoke on

		health will be elaborated.
Factor ^ Elaboration	Firstly, carbon monoxide is a poisonous gas. It can combine with haemoglobin and reduce the oxygen carrying capacity of red blood cells.	Temporal conjunctive relations ‘Firstly’, ‘Secondly’, ‘Thirdly’ and ‘Fourthly’ link different factors and their respective elaborations and thus strengthen the cohesion of the answer text. Relational processes ‘is’ and ‘contain’ bring out the attributes of the different substances to be described. Modal word ‘can’ and mental process in passive voice ‘is suspected’ indicate the possible hazardous effects on health of the substances to be described. Additive conjunction ‘and’ brings out the further effects on health of the substances described. Material processes ‘cause’ and ‘lead to’
Factor ^ Elaboration	Secondly, tar is suspected to be carcinogenic. It can cause inflammation of bronchial tubes and damage to lung tissue.	
Factor ^ Elaboration	Thirdly, nicotine is not only toxic, it can also be addictive. It causes the constriction of blood vessels and thus overtaxes the heart and lungs. It can also lead to stomach ulcers and upset the function of the nervous system.	
Factor ^ Elaboration	Fourthly, particulates cause damage of the respiratory system and contain substances which are carcinogenic.	

		<p>indicate the effects on health of the substances and bring out the cause-and-effect relationship.</p> <p>Material processes ‘reduce’, ‘damage’, ‘overtaxes’ and ‘upset’ elaborate how the different substances are hazardous to health.</p>
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Comparison

- Similarities and differences regarding the question:

Similarity 1

The ways to provide background information and orient the answer are similar in both texts. The phenomenon is provided as a declarative statement printed on a pack of cigarettes ‘吸煙危害健康’/‘CIGARETTE SMOKING IS HAZARDOUS TO HEALTH’. Circumstance of angle ‘根據香煙煙霧所含各物質對健康的影響’/‘by making reference to the effects on health of the different substances present in cigarette smoke’ and verbal process ‘解釋’/‘Explain’ in imperative mood are used in both texts to give instructions to students and guide them in answering the question.

Difference 1

Omission of subject is allowed in Chinese language as in ‘在一煙包上，印有下列語句’ (The following statement is printed on a pack of cigarettes). In contrast, such omission is not allowed in English, so passive voice is used to foreground the object into the subject position as in ‘The following statement is found on a pack of cigarettes’. It is revealed that a Chinese sentence without a subject can be expressed as a sentence in passive voice in English.

- Similarities regarding the answer:

Similarity 1

A declarative ‘吸煙危害健康，因為香煙的煙霧中包含一氧化碳、焦油、尼古丁和碳微粒四種物質’/‘Cigarette smoking is hazardous to health because cigarette smoke contains carbon monoxide, tar, nicotine and particulates’ is used in both texts to echo the direction and identify the phenomenon. Besides, in both texts, a causal conjunction ‘因為’/‘because’ is used to bring out the causal relationship between the different substances present in cigarette smoke and their harmful effects on health and the relational process ‘如下’/‘are’ as in ‘詳述如下’/‘Detailed explanations are as follows’ directs attention to the answer text.

Similarity 2

In both texts, material processes such as ‘減低’/‘reduce’, ‘損害’/‘damage’ and ‘擾亂’/‘upset’ are used to elaborate how the listed factors, i.e. the different substances present in cigarette smoke, result in the phenomenon that ‘Cigarette smoking is hazardous to health’. Other material processes like ‘使令’/‘cause’

and ‘造成/引致’/‘*lead to*’ which express the causal relationship are also employed in both texts.

Similarity 3

The factors of the phenomenon in a Factorial Explanation are usually presented in a non-temporal sequence. As a result, the employment of the temporal conjunctive relations ‘首先’ (firstly) and additive conjunctive relations ‘另外/再者/此外’ (moreover) in the Chinese text, and the four temporal conjunctive relations ‘*Firstly*’, ‘*Secondly*’, ‘*Thirdly*’ and ‘*Fourthly*’ in the English text is not to build temporal relationship, but to link different factors and build cohesion textually.