



Q	Answer as per MS	Marks	NOTES
1	any, chemical / substance, taken into / AW, the body ; modifies / affects / changes / AW, (chemical) reactions / metabolism ;		Any substance that modifies chemical reactions in the body , is called a drug.
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2 a.i	sleeplessness ; hallucinations ; muscle cramps / restless legs ; nausea ; vomiting ; headaches ; sweating ; aggression / agitation / restlessness / anxiety / mood swings / panic attacks ; AVP ; e.g. shivering / diarrhea		1. Sleeplessness Hallucinations .
a.ii	(addicts) turn to crime to finance their addiction / AW ; more opportunity to become drug dealers / mule/ AW ;		Addicts turn to crime to finance their addiction and many even become drug dealers.
b	1 harmless / dead / weakened / attenuated, (named) pathogen / microorganisms ; 2 injected / ingested ; 3 ref to antigens ; 4 antigen / vaccine, triggers antibody production ; 5 by lymphocytes ; 6 memory cells are produced ; 7 long-term immunity / rapid immune response ;		Addicts turn to crime to finance their addiction and many even become drug dealers.
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3	12.5 (ng cm ⁻³);;		$25 \times \frac{1}{2} = 12.5 \text{ ng cm}^{-3}$
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4 a	(nicotine is) a (chemical) substance taken into the body; that modifies / affects / influences, (chemical reactions in) the body; addictive / can cause withdrawal symptoms (when stopped) / AW;		Nicotine is a chemical substance , taken into the body , that modifies chemical reactions in the body , it is addictive and can cause with drawal symptoms when discontinued .
b	(nicotine is) a (chemical) substance taken into the body; that modifies / affects / influences, (chemical reactions in) the body; addictive / can cause withdrawal symptoms (when stopped) / AW;		Carbon monoxide binds permanently to haemoglobin forming carboxyharmoglobin which lowers the oxygen carrying capacity of the blood. Tar is carcinogenic . it sticks to alveoli leadings to reduced gaseous exchange and brings about respiratory infection by sticking to cilia.
c.i	1 more men smoked (between 1950–1998 than women); ORA 2 both decrease overall / between 1950 and 1998; 3 (overall) drop in men is more (than in women); ORA Ignore data 4 (1950)–1970: men decreasing and women increasing; 5 1970 onwards : both genders decreasing;		More men smoked between 1950 and 1998 , than women, an overall decrease was observed for both during the same. Period. Overall drop in men (82 % to 36%) was more than for women (40 – 30 %) . in the period 1950 – 1970 , percentage of male smokes decreased while that of female smokes increased 1970 onwards both genders decreases but the difference in number was less compared to the period before 1970 the maximum for male smokers was 82 % and for female smokers 50 % .



	<p>6 larger difference in numbers / %, before 1970s / earlier</p> <p>OR</p> <p>smaller difference in numbers / %, after 1970s / later;</p> <p>AW</p> <p>7 maximum (implied) for women was 50% and 82% for men;</p> <p>8 comparative data quote between men and women with units stated once;</p>	
c.ii	<p>number of deaths by (lung) cancer shows similar trend as percentage smokers; (correlation) in both men and women / AW;</p> <p>lag in the death rate trend (compared with smokers) / AW;</p> <p>relevant data quote from both graphs;</p> <p>trend more obvious in men / death rate in women is increasing overall;</p> <p>impossible to show conclusive link;</p> <p>(because) cannot control experimental conditions / other lifestyle factors;</p> <p>AVP;</p>	<p>Number of death lung cancer shows a similar trend , peaking in 1956 for males and 1976 for females. The trend in males is more obvious but for females the death rate shows an increase overall. Hence, it is impossible to show conclusive link , this may be because of lack of experimental control or other lifestyle factors.</p>
d	<p>toxins / AW, in smoke can cross the placenta;</p>	<p>Toxin in smoke can cross the placenta and increase the risk of miscarriage , still birth , low birth weight and deformities. Smoking</p>



	<p>increased risk, of miscarriage / still birth / premature birth / low birth weight / deformities; reduces oxygen available to the foetus / foetal brain damage; increased risk, of reduced lung, function / infection, in foetus / infants; babies more likely to become addicted / have withdrawal symptoms; AVP;</p>		<p>for pregnant women reduces oxygen availability to foetus increasing risk of reduced lung functions. Babies are likely to have withdrawal symptoms.</p>
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5	bacteria are made of cells ; ora		Antibiotics cannot treat viral infections because virus are not made of cells.
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