

Mark schemes

Q1.

[AO1 = 6 AO2 = 4 AO3 = 6]

Level	Mark	Description
4	13-16	Knowledge of the role of stress in illness is accurate and generally well detailed. Application is effective. Discussion is thorough and effective. Minor detail and/or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	9-12	Knowledge of the role of stress in illness is evident but there are occasional inaccuracies/omissions. Application/discussion is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	5-8	Limited knowledge of the role of stress in illness is present. Focus is mainly on description. Any discussion/application is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1-4	Knowledge of the role of stress in illness is very limited. Discussion/application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content:

- stress and illness are linked because stress affects the immune system
- role of cortisol in immunosuppression – sustained production of cortisol reduces immune function; interferes with the activity of white blood cells (leucocytes); reduces ability to fight infection
- stress is linked to infections (colds, viruses), cardiovascular disorders (heart problems, high blood pressure), cancers
- immune systems in vulnerable populations (carers, students at exam time) are compromised
- people in stressful occupations are more likely to suffer from illness.

Possible applications:

- Keira is experiencing chronic (long-term) stress – caring for elderly relative
- Keira is experiencing acute stress (difficulties at work)
- Keira is showing signs/symptoms of stress – poor sleep, anxiety, crying, panic-type symptoms (heart pounding/faint)
- the doctor is checking cardiovascular function (taking blood pressure) and a blood sample might show markers of stress and/or infection
- Keira's sore throat may be due to infection because her immune system has been compromised due to long-term stress.

Possible discussion:

- use of evidence to support the role of stress in illness, eg Kiecolt-Glaser (1984) NK cell activity in students at exam time; Kiecolt-Glaser (1995) increased wound healing times in stressed populations; Cohen (1993) incidence of the cold virus in people with high stress score; Yusuf (2004) link between heart attacks and chronic stress
- problems establishing cause and effect – being ill could cause/exacerbate stress; most studies are correlational so cannot determine causality
- alternative and interactionist explanations for illness – stress as a result of the combined effects of physiological pre-disposition, temperament/personality type and external stressors
- discussion of the beneficial effects of moderate stress
- practical implications – important to deal with the source of the stress rather than just mask the symptoms
- discussion in the light of broader debates, eg nature – nurture, determinism.

Credit other relevant material.

[16]

Q2.

[AO1 = 2]

1 mark for A: general adaptation syndrome.

1 mark for B: immunosuppression.

[2]

Q3.**[AO1 = 2 AO3 = 2]**

Level	Mark	Description
2	3-4	Outline of a study of immunosuppression is clear and accurate. Evaluation is clear, coherent and appropriate.
1	1-2	Outline is limited or muddled. Evaluation is limited or inappropriate.
	0	No relevant content.

Possible findings:

- Cohen (1993) – chance of developing a cold was significantly positively correlated with scores on a questionnaire of stressful life events over the year
- Kiecolt-Glaser (1984) – natural killer cell activity was significantly lower during periods of high stress (exam time) than during periods of low stress, with greater reduction in students reporting social isolation
- Kiecolt-Glaser (1991) – increase in antibodies to Epstein-Barr virus and in infectious illnesses in caregivers caring for people with Alzheimer's disease over a 13-month period compared to controls.

Possible evaluation points:

- contradictory findings, eg immunoenhancing effects of stress (Dharbar 2008)
- analysis of implications, eg importance of avoiding stress/learning to manage stress
- cause and effect cannot be established in correlational research – may be an alternative explanation for the correlation
- methodological issues, eg problems associated with self-report measures.

Credit other relevant material.

[4]