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**Syllabus points**

- Applications of Psychology to Health: stress as defined by Selye (1936), models of stress, health related consequences of stress – maladaptive and adaptive coping strategies
- Science Inquiry: Ethical guidelines and practices for psychological research, Formulating research, Methodology, Processing and analysing data.

**Conditions**

- Reading time: 5 minutes
- Working time: 50 minutes

**Task Weighting**

- 8% total weighting

**Structure of this paper**

Section	Number of questions available	Number of questions to be attempted	Suggested working time (minutes)	Marks	Score
Section One: Short Answer	2	2	35	33	
Section Two: Extended Response	1	1	15	16	
<b>Total</b>				49	

## Section One: Short Answer Response

(33 Marks)

This section has two questions. Write your answers in the spaces provided.  
Suggested working time: 35 minutes.

### Question One

(13 marks)

Mrs Lee and her Psychology class wanted to test their theory that different types of meditation techniques would improve stress levels before exams. The class collected participants from their own school; Year 7's, Year 9's, Year 11's, and Year 12's. The participants were aged between 11 and 18 years old and were randomly allocated into three groups. Group 1 practices mindfulness once a day and group 2 practice Mantra meditation once a day (a practice that involves repeating a word, phrase, or sound to bring about mental focus and clarity). Group 3 practiced no meditation beyond their normal daily routine. At the end of a two-month trial, a week before the exam period, all the participants completed a stress test.

The following results were collected:

	Mean Score on Stress Test (out of 100)
Group 1: Mindfulness	57
Group 2: Mantra Meditation	65
Group 3: No Meditation	79

A statistical test on the difference between the effect of practicing meditation verses no meditation on stress found that  $p = 0.47$

- a) Suggest a directional hypothesis that the class would have developed for this study.

(4 marks)

It is hypothesised that students aged 11 to 18 years old who either practice mindfulness or Mantra meditation every day will show lower levels of stress tested by a stress test before their exams, than students who didn't practice any meditation.

- b) Identify two possible sources of error in the conduction of this experiment. (2 marks)

Two sources of error could be that younger participants may not be able to practice the meditation properly and that student who do no meditation and continue on with their daily routine may already do some sort of stress management impacting the results.

- c) Define stress as defined by Selye (1936) (2 marks)

Stress refers ~~the~~ to the nonspecific response of the body to any demand.

- d) Outline what type/nature of stressor that being stressed about the upcoming exam is categorised by. (2 marks)

Psychological stressor refers to stress that arises due to an individuals thoughts, feeling and perspective on a situation or event.

- e) Name the type of stress these students are experiencing due to exam preparation and outline what this means. (3 marks)

Eustress would be experienced. Eustress refers to the positive stress response that can enhance productivity and motivation. This means that students feeling Eustressed are stressed but feel prepared, leading to them studying and having the motivation to continue studying.

## Question Two

(20 marks)

Hugh recently graduated University and was travelling to his first big job interview. Along the way he noticed his car tire had started to go flat and needed replacing. Hugh was panicked and felt instantly stressed about making it on time for the job interview. Luckily a repair shop was close by, and he managed to get it replaced almost instantly.

- a) Describe the duration of the stressor.

(1 mark)

A-cute (short term).

- b) Identify the stage of stress Hugh was in when realising he had a flat tire and outline the characteristics of this stage.

(4 mark)

Hugh was in the Alarm stage. Within the Alarm stage, it's the ~~initat~~ body's initial reaction to the stress where the amygdala senses the shock/reaction and sends signals to the hypothalamus which ~~info~~ initiates the production of the sympathetic nervous system which will make the adrenal glands start to produce Cortisol.

Hugh unfortunately did not get offered the job position, and it is now 3 months later, and he has failed to secure another interview opportunity. His financial situation has been a serious stressor of his for these past few months.

- c) Explain what may happen if Hugh is unable to resolve the stress, including both short-term and long-term impacts.

(5 marks)

If Hugh is unable to resolve the stress then he will be in the Exhaustion stage, where ~~there~~ <sup>there</sup> won't be enough cortisol being supplied to keep his blood sugar supply from going low which can lead to him feeling fatigue, sick and if severe maybe depressed. Short-term impacts could be fatigue, sickness and unmotivation. And long-term impacts could be depression, <sup>and</sup> severe health issues.

Due to the prolonged stress, Hugh decides to visit a psychologist, seeking help and support in managing his stress. The psychologist decides to assess Hugh's vulnerability to stress through The Social Readjustment Scale, developed by Holmes and Rahe (1967).

- d) Name the type of self-report measure used in the Social Readjustment Scale. (1 mark)

Likert scale (LCO)

- e) Outline one strength and one limitation of this measurement tool. (2 marks)

One strength is that it provides quantitative information making it easier to provide statistics. One limitation is that it doesn't take into consideration why an individual has selected their answer, no room for justification.

- f) Using Lazarus and Folkman's (1984) theory, outline the role of the following cognitive appraisals and apply them to Hugh. (4 mark)

Primary: Initial assessment of the stressor and environment  
around them. Hugh <sup>correctly</sup> identified that the stressor is mostly likely his financial situation

Secondary: Trying to find coping strategies or ways to deal with the stress and environment around them. Hugh has gone to see a psychologist to ~~eat~~ help cope with the stress

- g) Explain the method of coping Hugh is using in the scenario. (3 mark)

Emotion focused coping is being utilised. This refers to ~~focsin~~ focusing on <sup>ways to deal with</sup> ~~near the stressor~~ the stressor without dealing with it straight on, <sup>or</sup> ~~and~~ getting to the root cause of the stress. Hugh is going to psychologist to manage his stress but isn't trying to stop the actual stressor (financial issues).



## Section Two: Extended Response

(16 Marks)

This section has **one** question. Write your answers in the spaces provided.

Suggested working time: 15 minutes.

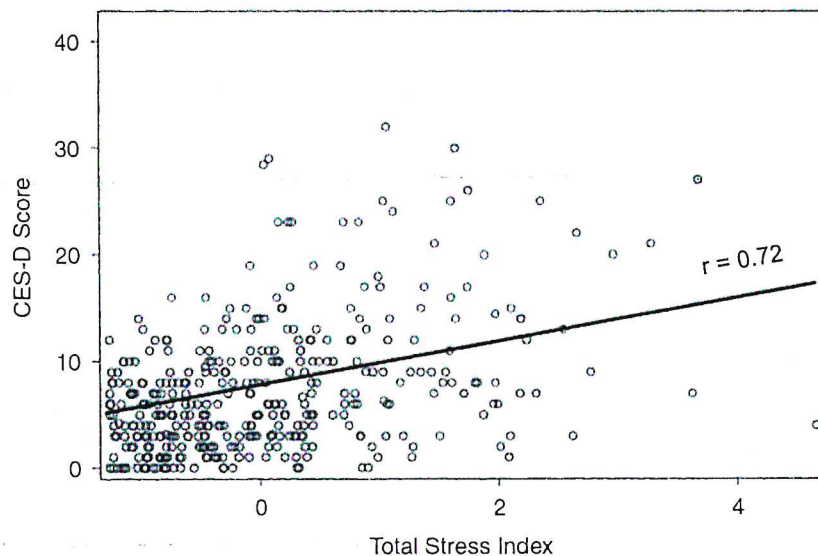
### Question three

(16 marks)

Psychology students at Harvard University investigated the relationship between occupational stress and depressive symptoms among coal miners. The participants were 364 coal miners from Ohio, America. The study was approved by the internal review board of Harvard University.

A total stress index score was calculated for each miner to measure the level of stress they experience as part of their occupation. The Centre for Epidemiologic Studies Depression (CES-D) scale was used. It contains 20 items that are self-rated on a four-point Likert scale according to how often each symptom occurred in the past week. The sum of the scores represents the overall (CES-D) score between 0 to 60. A score of greater than 16 is considered indicative of depression. The scatterplot below shows the results for the study.

Figure 1: predicted mean CES-D score by miner's stress index



Notes: Adjusted for age, sex, race/ethnicity, alcohol intake and smoking status.

In a series of questionnaires used to gather qualitative data, the miner's reported threat of harm (intentional and unintentional), excessive work in hard conditions and a lack of support from supervisors as their three main stressors.

In your answer, refer to the above scenario by creating a well-constructed response, addressing the following:

- Outline what stress is according to Lazarus and Folkman (1984) and identify two types of stressors that the miner's experience in their work. (4 marks)
- The university's Internal Review Board is an example of an ethics committee. Describe the role of an ethics committee and outline two ethical guidelines that this committee would monitor during the study, stating how this would occur. (6 marks)
- Based on the data illustrated in Figure 1 on page 24, comment on the relationship between stress and depressive symptoms. (4 marks)
- Describe how psychological stress arises according to Lazarus and Folkman (1984) (2 marks)

Question number: 3

Stress according to Lazarus and Folkman stress refers to

Two types of stressors the miners experience is Environmental and Social.

The role of the ethics committee is to make sure all psychological experiments ~~allow for~~ are ethical and ~~use~~ allow for the participants to have rights such as privacy, ~~see~~ security, the rights to leave and know the true reason for the experiment. And to make sure experiments ~~would~~ ~~don't~~ have the potential to harm the participants physically or mentally, ~~for~~ and leave short or long term effects that could impact their health. Two ethical ~~guidelines~~ guidelines that the committee would need to monitor ~~is~~ during the study is privacy ~~and~~ which is their right to protect the participants personal information when being published and debrief which is telling the participants the true meaning behind the experiment. These could occur by not putting a name to the participants data when publishing their results (privacy) and

Question number: \_\_\_\_\_

telling the participants what the study is either to make sure ~~there~~ there ~~isn't~~ isn't any ~~step~~ confusion (debrief).

~~Partici~~ The relationship between stress and depressive symptoms is that coal miners who experienced more stress ~~would~~ have a higher chance of presenting depressive symptoms. Meaning higher stress levels equals increase likeliness of depression. whilst coal miners who experienced low levels of stress showed ~~little~~ lower ~~sy~~ depressive ~~symptom~~ symptoms. Meaning lower stress levels equals lower likeliness of depression.

Psychological stress arises from an individuals own perspective, thoughts or feelings on an issue, event or the environment around them, and how they cope with them.



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Question number: \_\_\_\_\_

**END OF TEST**