# OCCUPATIONAL ENGLISH TEST

## READING PRACTICE NO.07

## Part A

**TIME**: 15 minutes

Look at the four texts, **A-D** . For each question, **1-20**, look through the texts, A-D, to find the relevant information. Write your answers in the spaces provided in this Question Paper. Answer all the questions within the 15-minute time limit. Your answers should only be taken from texts A-D and must be correctly spelt.

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## Text A

Angina (angina pectoris) is a type of chest pain caused by reduced blood flow to the cardiac muscles. The arteries supplying blood to the heart muscles are narrower due to atherosclerosis.
Stable angina is the most common type of angina. Medical attention is needed if it is a first event. The attacks usually occur when the heart is required to work harder than usual such as during physical exertion. Emotional stress or a large meal can also provoke an attack. The pain generally passes within 5 minutes. The pain may ease sooner if the patient rests or takes prescribed medication. Many patients who have been diagnosed as having angina, know what activities are likely to cause an attack. This means they can modify the activity or take medication in advance to reduce the severity of the attack.

Unstable angina is more serious and requires urgent medical attention. It is a sign atherosclerosis has developed to a point that a coronary artery has become too narrow to carry sufficient nutrients to the cardiac muscle or that a fatty plaque has ruptured causing a clot to form and occlude an artery. The type or severity of pain may be different to a patient’s usual angina attack. It will be unexpected and may occur while the patient is resting. It is usually a stronger pain and typically lasts longer than stable angina attacks, often 30 minutes or more. The attack will continue even if the patient rests or takes medication. An unstable angina attack may be a lead to prolonged oxygen deprivation of the heart, causing a myocardial infarction.

Variant angina (Prinzmetal's angina) is a very rare genetic condition. In variant angina, the coronary arteries spasm, temporarily reducing the blood flow to the heart. It typically occurs when the patient is resting. The pain is usually severe but may be relieved by medication. Cocaine use, stress and smoking may trigger this type of angina.

# Text B

**Clinical assessment**

Take thorough family history of heart disease to establish genetic risk

Ask about lifestyle activities including tobacco and alcohol intakes, exercise and diet

- Check for presenting chest pain characteristics of:
    - feeling tight, dull or heavy
    - pain in the center of chest
    - duration of pain
    - onset trigger
    - what relieved pain
- Check for other symptoms of:
    - radiation to left arm, neck, jaw, stomach, back
    - shortness of breath with or without chest discomfort.
    - cold sweat
    - nausea or
    - light-headedness
- Female patients more likely than males to report:
    - shortness of breath
    - nausea/vomiting
    - back or jaw pain

# Text C

**Diagnosing angina**

Unstable angina diagnosis focusses eliminating if Myocardial Infarction imminent or has occurred

**Stable and variant angina diagnosis starts with:**

- Clinical assessment
- an electrocardiogram (ECG)
- Blood tests to identify aggravating factors such as anemia

**Test to be arranged:**

- a CT coronary angiogram or invasive coronary angiography to identify blocked blood vessels and potential areas for blockage
- Functional imaging tests to see how the heart works under stress
    - Exercise ECG to see how the heart works while walking on a treadmill or using an exercise bike – this is not appropriate for variant angina

**Treatment options for angina**

- Lifestyle changes can ease variant and unstable angina symptoms and eliminate stable angina symptoms
- Refer to cardiac rehabilitation programme
- Attack management medication: Glyceryl Trinitrate (GTN ) to relieve attacks
- Attack prevention medications options are:
    - beta-blockers
    - calcium channel blockers, first choice for variant angina
- Complication prevention options, especially for non-stable angina patients include:
    - low-dose aspirin
    - Clopidogrel
    - stat injection of a blood-thinning medicine on diagnosis
    - statins to reduce
    - ACE inhibitors
- Surgical options for stable angina not managed by medication and lifestyle change
    - coronary artery bypass graft (CABG percutaneous coronary intervention (PCI)

## Text D

**Self-help strategies to ease the symptoms of angina and reduce risk of complications include:**

- eating a healthy, balanced diet
- regularly gently exercising such as walking on flat ground or treadmill, swimming, gentle cycling or using exercise cycle
- cutting down on alcohol
- stopping smoking
- losing weight if overweight
- avoiding large meals avoiding stress and learning stress-reduction techniques
- rest as soon as symptoms start take medications as prescribed

## Questions 1-7

For each question, 1-7, decide which text (A, B, C or D) the information comes from. You may use any letter more than once.

**1.** Self-help strategies?

**2.** How long pain from unstable angina might last?

**3.** What angina pectoris is?

**4.** The surgical options to treat angina?

**5.** The symptoms of angina that women might experience more than men?

**6.** The characteristics of chest pain that might be experienced in a person with angina?

**7.** Exercise options for a person with angina?

## Questions 8-14

Answer each of the questions, **8-14**, with a word or short phrase from one of the texts. Each answer may include words, numbers or both.

**8.** What type of angina is the most common?

**9.** What type of coronary angiography might be used to identify blocked blood vessels?

**10.** If the heart suffers prolonged oxygen deprivation, what other condition may develop?

**11.** Which arm might pain radiate to in a person experiencing an angina attack?

**12.** What should a person with angina do as soon as symptoms start?

**13.** Which medications are the first choice for variant angina sufferers?

**14.** What can be established from taking a thorough family history?

## Questions 15-20

Complete each of the sentences, **15-20**, with a word or short phrase from one of the texts. Each answer may include words, numbers or both.

**15.** In Prinzmetal's angina, the _____ spasm.

**16.** Avoiding _____ meals can ease symptoms of angina.

**17.** Taking_____ aspirin can reduce the risk of developing complications of having non-stable angina.

**18.** Ask patients about their lifestyle activities including _____ and _____ exercise and diet.

**19.** Learning _____ can ease symptoms and prevent complications of angina.

**20.** Unstable angina is serious and requires _____ .

# Part B

**TIME:** 45 MIN for both B&C

In this part of the test, there are six short extracts relating to the work of health professionals. For questions **1-6**, choose the answer **(A, B or C)** which you think fits best according to the text.

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**1.** In which group of the Australian population is acute gastroenteritis most prevalent?

A. AIt affects all groups equally

B. Adults aged 57 or over

C. Children aged 5 years or less

## Cost of gastroenteritis in Australia: A healthcare perspective

Using 2016 prices, the estimated annual direct per capita cost of acute gastroenteritis illness was AUD$14.87 (USD$10.71), equating to AUD$20.27 (USD$14.59) per case. The estimated overall economic burden in Australia was AUD$359 million (USD$258 million; AUD$1.5 million per 100,000 people).

The major contributors to this cost were hospital admissions (57.1%), emergency department visits (17.7%), and general practitioner consultations (14.0%). Children under five years of age have the highest per capita rates of acute gastroenteritis illness; however, service utilisation rates vary by age group and both young children and older adults accounted for a substantial proportion of the overall economic burden attributable to acute gastroenteritis illness.

Conclusions: Although chronic diseases comprise a large cost burden on the healthcare system, acute illnesses, including acute gastroenteritis illness, also impose substantial direct healthcare system costs. Providing data on current cost estimates is useful for prioritizing public health interventions, with our findings suggesting that it would be ideal if targeted interventions to reduce hospitalisation rates among young children and older adults were available.

**2.** According to this report were women with mental illness more prone to back pain or were men with back pain more prone to mental illness?

A. It is more likely that a man with back pain will have a mental illness than it is for a woman with mental illness to develop back pain

B. It was more likely that a woman with mental illness would develop back pain than it was for a man with back pain to have a mental illness.

C. It is more likely that a woman with back pain will have a mental illness than it is for a man with mental illness to have back pain

**Millions of Australians suffering from combined physical, mental ill health, new report finds**

A report compiled by the Australian Health Policy Collaboration (AHPC) at Victoria University, found 2.5 million people are living with both mental and physical conditions. It found clear links between the two — people living with chronic physical health issues are at a higher risk of developing mental health conditions, while those suffering ill mental health were also more likely to develop physical illness.

A chart showing that 28 percent of men with back problems, and 27 per cent of women, also suffer mental health issues. It said the combined health conditions affected welfare and education, health services and costs, productivity, employment, and social participation. The research revealed men with mental health conditions were 52 per cent more likely to report having a circulatory system disease than the general population, while women with ill mental health were 41 per cent more likely.

Men with mental health conditions were 28 per more likely to report having back pain, and women were 68 per cent more likely.

"Improving the physical health of people living with mental health conditions, and conversely, the mental health of people living with physical health conditions, must become a priority to improve the health of all Australians," the report said.

**3.** What is a key problem facing staff trying to assess and manage incontinence?

A. There are no effective equipment available to monitor levels of incontinence

B. Radio links break so nurses do not know a patient has pressed their call bell

C. Patients always have a urine infection

## Incontinence management using an electronic continence pad.

Urinary incontinence is an embarrassing and disabling problem, and a major determining factor for nursing home placement. It affects 2 million Australians at a cost of $1 billion per annum. In residential aged-care facilities, incontinence detection and documentation and accurate assessment of voiding patterns are necessary to implement effective best practice continence management.

However, current processes are labour and time intensive. Current practices also frequently breach infection control standards for staff and threaten the dignity and privacy of the incontinent person. There is a lack of valid instrumentation to assess incontinence and monitor continence care.

The AEGIS Continence Management System comprises a sensor inserted in a pad liner which detects and monitors wetness. It then transmits the information, via radio link, to a nurse's pager and to a tailored software application that creates continence assessment charts. The project will include AEGIS I which is the existing prototype detecting wetness, the AEGIS II that monitors degree and volume of wetness and the AEGIS III that detects chemical markers of infection or other clinical conditions.

**4.** There are many factors that affect a person's quality of life. Which particular features of a person's life are most apparent to a physician?

A. Friendship, spirituality and employment history

B. Changing attitudes to quality of life, effect of a stroke and effects of surgery

C. Limited life span ongoing pain and loneliness

## Quality of Life in the Elderly - Health related quality of Life: influences

Some of the factors that influence health-related quality of life (eg, institutionalization, reduced life expectancy, cognitive impairment, disability, chronic pain, social isolation, functional status) may be obvious to health care practitioners. Practitioners may need to ask about others, especially social determinants of health (ie, the social, economic, and political conditions that people experience from birth to death and the systems put in place to prevent illness and treat it when it occurs).

Other important factors include the nature and quality of close relationships, cultural influences, religion, personal values, and previous experiences with health care. However, how factors affect quality of life cannot necessarily be predicted, and some factors that cannot be anticipated may have effects. Also, perspectives on quality of life can change. For example, after a stroke that caused severe disability, patients may choose treatment (eg, life-saving surgery) to sustain a quality of life that they would have considered poor or even unacceptable before the stroke.

**5.** The severity of kidney disease is diagnosed by checking what?

A. The amount of blood that passes through the kidneys

B. The amount of waste in the blood that is cleared by the kidneys

C. The amount of urine that passes through the kidneys

## Chronic kidney disease

Chronic kidney disease (CKD) refers to all conditions of the kidney, lasting at least 3 months, where a person has had evidence of kidney damage and/or reduced kidney function, regardless of the specific diagnosis of disease or condition causing the disease. Evidence of kidney damage manifests as either urinary protein or albumin (a type of protein that is a more sensitive and specific marker of kidney disease), blood in the urine, or scarring detected by imaging tests.

CKD is categorised into 5 stages according to the level of reduced kidney function and evidence of kidney damage. Stages of CKD are measured by the glomerular filtration rate, which is the amount of blood the kidneys clear of waste products in one minute. Because this rate cannot easily be measured directly, current practice is to estimate it by applying a formula based on age, gender and creatinine (a breakdown product of a molecule found in muscle that is important for energy storage) in the blood. An individual can move up and down through the first four stages of severity, but once they reach stage 5, their kidney function does not usually improve.

**6.** What is the issue being raised in this memo?

A. There are errors in one part of the patient information leaflet

B. There are errors in two parts of the patient information leaflet

C. There are errors in three parts of the patient information leaflet

## Memo: Caspofungin 70mg powder for concentrate for solution for infusion

Cadiasun Pharma GmBH has informed us that there is an error on the patient information leaflet for the above product. The error is on the portion of the leaflet which is intended for Healthcare Professionals, in the sections providing instructions for preparation of both 70mg/m2 and 50mg/m2 infusion for paediatric patients >3 months of age.

In the incorrect version of the leaflet, the final concentration of the solution is given as 5.2mg/ml for both dilutions. The correct final concentration is 7.2mg/ml, however in addition to the error on the Patient Information Leaflet, there is also an error on the Summary of Product Characteristics for the product.

The heading for preparation of the 70mg/m2 infusion for paediatric patients > 3 months and the heading for preparation of the 50mg/m2 infusion for paediatric patients > 3 months incorrectly state in brackets ‘using a 50-mg vial’. The headings should read as follows:

Preparation of the 70 mg/m2 infusion for paediatric patients > 3months of age (using a 70-mg vial)
Preparation of the 50 mg/m2 infusion for paediatric patients > 3months of age (using a 70-mg vial)
Steps have already been taken to correct the errors on both the patient information leaflet and the Summary of Product Characteristics.

Please note, the patient information leaflet and Summary of Product Characteristics for the 50mg presentation of the product are correct.

# Part C

In this part of the test, there are two texts about different aspects of healthcare. For questions **7-22**, choose the answer (A , B, C or D) which you think fits best according to the text.

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## Text 1

In an aging world the rampant destruction of families and emotions due to Alzheimer's disease is increasing. Around the planet forty-seven million people are living with the disease at an annual cost of $236 billion (when other forms of dementia are factored in). The estimated 5.4 million Americans suffering from this disease require 18.1 billion hours of unpaid care each year—an especially daunting reality during a time when Medicare and Social Security are under attack, as many other costs exist. By 2050 Alzheimer's treatment and care is expected to top $1 trillion, bumping Medicare costs up by 360 percent.

Eli Lilly's recent attempt at a cure has set the company back hundreds of millions of dollars and may result in thousands of layoffs. High hopes for its drug, solanezumab, were quashed after a recent failed late-stage clinical trial; the company's stock has fallen 11.6 percent in the last two weeks.

Solanezumab targeted beta amyloid deposits in the brain. For the last twenty-five years researchers have speculated that deposits of the amyloid-peptide "initiates a sequence of events that ultimately lead to AD dementia." Thus far companies like Eli Lilly and Biogen have failed to produce potential remedies using this hypothesis. This has not stopped research, however. Earlier this week neuroscience professor Li-Huei Tsai, who is also the director of MIT's Picower Institute for Learning and Memory, announced the results of a potentially game-changing early-stage trial.

In a forthcoming Nature article Tsai and her co-authors report LED lights flickering at a frequency that stimulates gamma oscillations at 40 hertz substantially reduces beta amyloid plaques in mice. Targeting the brain's hippocampus, a critical region in memory formation and retention, researchers temporarily suppressed these proteins. As with all such trials the researchers remain cautiously hopeful. Tsai says, "It's a big 'if,' because so many things have been shown to work in mice, only to fail in humans.

But if humans behave similarly to mice in response to this treatment, I would say the potential is just enormous, because it's so noninvasive, and it's so accessible."

Forty hertz is the typical gamma oscillation in human brains; these waves range from twenty-five to a hundred hertz. (Trials in Tsai's lab at other levels were not effective.) Since 2009 researchers have been able

to induce gamma waves in mice using optogenetics, a technique first dreamed up by Francis Crick in the late nineties that utilizes light in order to influence cellular activity in living tissues. It is now considered a breakthrough method for changing neuronal behavioral patterns.

Tsai and her team found that an hour of stimulation at forty hertz resulted in a 40-50 percent reduction in plaques while enhancing gamma oscillations. The proteins returned to their original levels within a day, leaving researchers to wonder if longer courses of treatment will more effectively, or even permanently, reduce protein growth. While the rush for a cure continues, preventive measures are becoming increasingly important. Meditation has been shown to influence gamma activity, while listening to binaural beats might yield positive results.

Movement is among the most important facets of memory control and retention. One of exercise's main benefits is neurogenesis, which includes the production of IGF-1 and BDNF, proteins that are protective against dementia. Keeping active significantly increases your brain's hippocampal volume, resulting in improved memory. One of our age's most damaging effects is the outsourcing of memory that instant access to technology offers. Studies have shown using GPS reduces hippocampal volume; checking the internet for every question instead of thinking through ideas and seeking alternate means is another memory-draining habit that has become commonplace.

Perhaps most interestingly is the importance of cognitive variety, flexibility, and cultivating an ability to consider opposing beliefs. As with bones, our brains operate best when met with resistance. Social interactions and daydreaming are essential for memory retention as well. Engaging in creative pursuits and flow states are ways to strengthen your memory system, as are learning new languages and instruments—basically, anything that challenges your current skill set.

**7. What's the author's concern in the first paragraph?**

A. That Alzheimer's disease is on the rise.
B. That the costs for the treatment for Alzheimer's disease are on the rise.
C. That the unpaid care for Alzheimer's disease is on the rise.
D. That families are being destroyed by Alzheimer's disease.

**8. What brought about the financial difficulties of Eli Lilly?**

A. The competition from another company.
B. Lack of funding.

C. Their effort to introduce a cure for Alzheimer's.

D. The fact that their stocks plummeted by 11.6%.

**9. Eli Lilly and Biogen have:**

A. based their efforts to develop a cure for Alzheimer's on the same assumption.

B. spent 25 years carrying out research in order to find a cure for Alzheimer's.

C. not given up their hopes for discovering a cure for Alzheimer's.

D. failed in their attempt to produce a common cure for Alzheimer's.

**10. What is Tsai referring to in the fourth Paragraph when she says "It's a big if"?**

A. To the certainty of developing a new drug that would work on people.

B. To the uncertainty of developing a new drug that would work on people.

C. To the uncertainty of achieving the same results in humans as in mice.

D. To the certainty of applying a treatment on humans that has already worked on mice.

**11. What is optogenetics?**

A. A dreamed technique.

B. A technique that uses light to impact activity in cells.

C. A technique that uses light to impact activity in the prefrontal cortex.

D. A technique that changes behavior.

**12. Which of the following has not given any results in the treatment and prevention of Alzheimer's?**

A. Gamma waves stimulation.

B. Meditation.

C. Listening to binaural beats.

D. Healthy diet.

**13. Instant access to technology**

A. increases human memory.

B. produces brain damage.

C. reduces the risk of Alzheimer’s.

D. increases the risk of Alzheimer’s.

**14. Which of the following hasn’t shown results in the prevention of Alzheimer’s?**

A. Social interaction

B. Daydreaming

C. Learning a new language

D. Developing resistance

## Text 2

There is an old saying in education that girls cry tears while boys cry bullets. In other words, females are allowed in our society to express their vulnerability and less pleasant emotions such as sadness. While boys must remain stoic and shoulder the burden quietly or else get angry, and express their pain not through outbursts of emotion, but instead through action. Might there be a biological phenomenon behind these culture-based roles? A study published online in the journal Depression and Anxiety suggests so. It found that boy's brains react differently than girls in the aftermath of a highly stressful event.

Researchers at Stanford University discovered this by scanning the insula, or insular cortex, of boys and girls who had PTSD (Post-traumatic Stress Disorder) and comparing them to those who didn't. This is a region deep within our brain responsible for integrating emotions. Feelings and the sensation of pain are processed here. It is also where empathy emanates from. The insula takes in data from other parts of the body and related areas of the brain, and incorporates it all into emotions and actions.

This is the first study to denote a gender difference in how the brain reacts to PTSD. In girls, the insula developed or aged rapidly. The same process was not observed in boys. Victor Carrion, MD was the study's author. He is a professor of psychiatry and behavioral sciences at the university. Dr. Carrion told the Stanford Medicine News Center that this particular region played a key role in PTSD's development. "The difference we saw between the brains of boys and girls who have experienced psychological trauma is important because it may help explain differences in trauma symptoms between sexes," he said.

This is a substantial breakthrough, as it could help neurologists develop personalized treatment options for PTSD sufferers depending on gender. With children and teens, while some who are exposed to a serious trauma do develop PTSD, others don't. Researchers still aren't sure why that is. They do know that girls are more likely to develop it than boys.

In this study, the brains of 59 participants, each between the ages of 9 and 17, underwent MRI brain scans. 30 of them had PTSD. Another 29 took part as a control group. 16 boys and 14 girls had suffered trauma, while another 14 boys and 15 girls had not. Normal participants showed no differences in insula structure, regardless of gender. Of those who were traumatized, 5 participants experienced one episode of severe trauma, while 25 had been exposed to two or more episodes. Researchers tried to match up participants and controls, comparing those of a similar age and IQ.

The area within the insula that changes due to severe trauma is known as the anterior circular sulcus. Researchers discovered that while in traumatized boys this area grows larger than normal, with girls it shrinks. Another way to look at it is that its development accelerates. These changes in structure are thought to be integral to PTSD's development. The shrinkage seen in female brains may be the reason why girls are more prone to PTSD.

Dr. Megan Klabunde was the study's lead author. She told the BBC, "Our findings suggest it is possible that boys and girls could exhibit different trauma symptoms and that they might benefit from different approaches to treatment." She added that high levels of stress might lead to early puberty in girls, as some previous studies suggest. This breakthrough may also help neuroscientists understand how each gender processes emotions.

**15. A new study has recently**

A. explained an old saying.

B. sustained a belief considered to be a biological phenomenon.

C. sustained a belief considered to be a cultural concept.

D. provided biological grounds for something considered to be a cultural concept.

**16. Which of the following is not a characteristic of the insula?**

A. It integrates emotions.

B. It processes feelings of pain.

C. Empathy originates there.

D. It relates areas of the brain.

**17. Why is this study significant?**

A. Because it defines gender differences.

B. Because it may lead to an explanation of gender differences.

C. Because it may lead to an explanation of traumatic experiences.

D. Because it may lead to an explanation of variations in trauma symptoms between boys and girls.

**18. What are girls more likely to develop than boys according to the information in paragraph 4?**

A. Serious traumas

B. PTSD

C. Treatment options

D. Personalized treatment options

**19. In the control group**

A. 16 boys had suffered trauma.

B. 14 boys had suffered trauma.

C. Neither the boys or girls had suffered trauma.

D. Five participants experienced one episode of severe trauma.

**20. Which of these factors was not considered in the study?**

A. Gender

B. Age

C. IQ

D. Background

**21. The changes in the structure of the insula suggest**

A. That the traumas are very severe.

B. That traumatized boys develop PTSD.

C. That girls are more prone to have psychological issues than boys.

D. Why girls are more likely than boys to develop PTSD.

**22. What could be the outcomes of the study as suggested in paragraph 7?**

A. Development of different preventative medicine towards boys and girls.

B. Development of different treatment methods for boys and girls.

C. Development of new techniques to treat trauma symptoms.

D. Development of new treatments to prevent trauma.

# Answer Key

To check the answer key, please visit:

https://docs.google.com/document/d/1B8FBM5wehitVAsUuVqh2xuuGzzSGrZzUMwakFTKjfsc/edit?usp=sharing