

READING TEST 25

PART A

TIME: 15 minutes

Look at the four texts, A-D, in the separate Text Booklet.

For each question, 1-20, look through the texts, A-D, to find the relevant information.

Write your answers on the spaces provided in this Question Paper.

Answer all the questions within the 15-minute time limit.

Your answers should be correctly spelt.

Text A

Chronic fatigue syndrome (CFS)

Chronic fatigue syndrome (CFS) is a highly complex illness that results in significant disability and a considerably diminished quality of life. Due to continued questions regarding etiology, the period of onset for the illness is of considerable interest to researchers in the field. There is fairly little strife as to whether the illness labels CFS, ME, ME/CFS, myalgic encephalopathy, and SEID represent one distinct condition, whether they are part of an illness spectrum, or whether they are simply different terms used to describe the same condition. CFS, ME, ME/CFS, and the recently named SEID, are often associated with different case criteria. Early case criteria developed by Holmes. specify that the illness must have a “new onset of persistent or relapsing, debilitating fatigue” without any previous history of similar problems. Additionally, Holmes stipulate that the main symptoms of CFS must occur over a few hours or days, indicating a sudden or acute onset. According to Holmes, symptoms are only met if they begin at the time of the fatigue onset or following onset. Another case criteria for CFS is referred to as the Oxford Criteria, which stipulate that CFS involves a “definite” onset as well as clear evidence of infection at the time of onset or first symptoms. Similar to the Oxford Criteria, the Fukuda criteria describe the onset of the fatiguing illness as “new” and “definite”.

Text B

The terms Myalgic Encephalomyelitis (ME) and Myalgic

Encephalomyelitis/chronic fatigue syndrome (ME/CFS) have corresponding case criteria, which are different from the Fukuda criteria in that they require what are considered by many to be key symptoms of the illness (e.g. post-exertional malaise and cognitive dysfunction). The criteria for ME/CFS specify that an individual must have a “significant degree of new onset” fatigue. Similar to the Holmes criteria for CFS, the case criteria for ME/CFS stipulate that symptoms can only be counted as meeting criteria if they occur or become significantly worse after the onset of the illness. Carruthers et al. describe onset as “distinct” and assert that most individuals experience an acute onset; however, they also assert that some individuals are unhealthy prior to their ME/CFS onset and may not be able to identify a specific trigger for the development of ME/CFS, or they may experience a more “gradual” or “insidious” onset.

Text C

Hyde’s Nightingale Definition of ME stipulates that ME is both chronic and disabling and is characterized by an acute onset. Additionally, Hyde describes ME as an epidemic or an endemic occurring in two phases. Additionally, Hyde indicates that ME often follows multiple, minor infections in individuals with susceptible immune systems or immune systems that are weakened by severe stressors. Hyde describes the initial phase of ME as the Primary Infection Phase, which is characterized as an epidemic or endemic infectious disease with an incubation period of between four and seven days. He describes the second phase as the Secondary Chronic Phase, occurring with two to seven days of the Primary Infection Phase. In this phase, Hyde asserts that there are measurable changes in the central nervous system (CNS) of an affected individual and that this phase is the chronic form of the disease that is most commonly depictive of ME.

Understanding the cause of ME can be like going through labyrinthine routes in scientific discovery, as Hyde asserts that all cases of epidemic and primary ME result from an infectious or autoimmune agent, but he also suggests that there are often other potential causes that may go unnoticed prior to the onset of illness or as part of the illness.

Text D

There is not one universally used or empirically derived definition of onset duration for ME and CFS. Researchers interested in assessing the mode of illness onset have used various definitions. Often, the distinction is made between sudden and acute onset and insidious and gradual onset, but the duration length prescribed to each category differs. For instance, DeLuca et al. defined sudden onset for CFS as an unrecoverable “viral-like illness” that could be traced to a definite date. Gradual onset was described as a “slow progression of symptoms over a period of weeks to several months” or longer. In his study of CFS in an adolescent sample, Bell defined sudden/acute onset as an “abrupt onset of constant and debilitating fatigue that could be dated to a specific event or illness” . He described all other onset patterns as gradual.

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.

In which text can you find information about;

1 .Occurs in two different phases.

Answer _____

2. All patterns are gradual.

Answer_____

3. He believed that ME is more complicated.

Answer_____

4. Controversy over the disease conditions.

Answer_____

5 .No clear definition.

Answer_____

6. Theory which suggests beginning of body weakening.

Answer _____

7 .Causes a spike in symptoms and a massive energy crash.

Answer _____

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. Who thinks that ME is long lasting and ant it can be acquired extreme onset?

Answer _____

9 .Who defined onset as incurable?

Answer _____

10. According to which principle, CFS involves a definite onset & clear evidence of infection?

Answer _____

11. Who specified that the CFS symptoms must occur over a few hours or days, indicating an acute onset?

Answer _____

12 .Who described that sudden onset for CFS as an unrecoverable viral-like illness?

Answer _____

13 .Whose statement signifies that the affected patient may go through a highly secretive and detrimental beginning?

Answer _____

14 .Who described onset as more debilitating fatigue?

Answer_____

Similar to the Oxford Criteria

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 ._____ described the onset phase of ME as the Primary Infection

16. ME may follow _____ infections in patients with not-so-strong immune system

17 .CFS criteria are said to have much more similarity with respect to_____

18. CFS may comprise a_____ onset and strong evidence of infection when there are first signs of symptoms.

19. The distinction is made between _____ and insidious/gradual onset, but the duration length prescribed to each category differs.

20._____ may occur due to an infectious or autoimmune agent.

PART B

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.

1 What is correct about gait disturbance?

Pelvic tilt is common

Fast gait speed and improved gait pattern is the most important goal of stroke rehabilitation

A hemiplegic gait may include body asymmetry, decreased weight bearing on the affected side.

Gait disturbance

Gait disturbance is the most common problem after stroke. This problem is related to poor ADL and mobility, and increases the risk of fall in severe cases. The body alignment of stroke patients becomes asymmetric if they have a hemi-paralysis, muscle weakness, motor and sensory function decrease. These problems produce a hemiplegic gait in stroke patients. It may include poor equilibrium reaction, and impaired selective motor control. Good body alignment is very important clinically because asymmetry leads to inefficient energy during walking, the risk of musculoskeletal injury in the unaffected side, and loss of bone density. Excessive pelvic elevation and the pelvic tilt angle is directly connected to hemiplegic gait and poor motor function in stroke patient causes an excessive pelvic tilt during gait

2 The notice is talking about;

Postoperative care.

functions of IV insulin

insulin dosage

IV Insulin Infusions

Patients that have required IV insulin infusions can be transitioned to subcutaneous insulin once infusion rates are stable and glucose controlled, particularly if a diet has been initiated. Because IV insulin has a very short half-life, the subcutaneous insulin should be administered prior to discontinuation of IV insulin. The basal infusion rate during fasting is a good predictor of basal subcutaneous insulin requirements, however, providers often reduce the amount by 20% upon transition. For instance, if a patient required 1.5 unit/hour of IV insulin overnight, this would suggest a basal need of approximately 36 units of insulin daily. However, reducing this by 20% would result in a starting basal dose of 30 units of insulin daily.

3 The use of molecule-altering technologies;

has flared up more concerns.

is not suitable.

is fast advancing.

Molecule-altering technologies

The advent of molecule-altering technologies and improved synthetic methods has led to the finding of newer proteins and peptides that resemble human proteins and peptides. Although, capable of producing potential therapeutic benefits, protein molecules have serious biopharmaceutical concerns such as, poor shelf- life, rapid degradation in the physiological environment, poor solubility, immunogenicity and antigenicity. These concerns can be overcome by utilizing the beneficial properties of polyethylene glycols and PEGylation. 'PEGylation' is the process of chemical attachment of PEG to bioactive proteins and peptides, to modify their pharmacokinetic and pharmacodynamic properties.

4 The notice is talking about;

when to perform the exercise

best exercise timing

benefits of exercise

Moderate mid-postprandial exercise

Although an uneasy consensus favoring moderate mid-postprandial exercise as better suited for glycaemia benefits exists among researchers, pre-meal exercise has its advantages: little risk for hypoglycemia, enhanced insulin sensitivity, and improved muscle glycogen content and GLUT-4 protein levels. The downside of pre-meal exercise is elevated postprandial glucose (PPG). A recent systematic review concluded that >45 min of aerobic exercise (AE) post-meal offered consistent glycaemia benefits. Also, the review identified resistance training as an effective modality in this regard. The patient found a 30-min pre-meal walk followed by another 30 minutes of post-meal walk blunted the post-meal glucose surge better than a 60 min pre-meal or post-meal walk. The post-meal walk might have cleared some of the extra blood glucose arrived from the liver. Split exercise at lunchtime was comparable to mid-postprandial exercise in improving glycaemia and oxidative stress, although there was less hyperglycemia after the meal.

5 Zidovudine can;

Increase decrease of lactate.

Lead to fatty change

Be used for treating anemia

Zidovudine

Nausea is another common side effect that may be present in early zidovudine use. Other side effects of zidovudine may include granulocytopenia, myopathy, lactic acidosis, hepatomegaly with steatosis, headache. Myopathy may occur within 6-12 months of initiating zidovudine, and has an insidious onset that involves proximal muscle weakness and exercise-induced myalgias. The mechanism of myopathy is believed to be mitochondrial toxicity within myocytes. Zidovudine should be used with caution in patients who have anemia (hemoglobin less than 9.5 grams/deciliter). Reduction of hemoglobin may occur as early as 2 to 4 weeks. Severe anemia may require dose adjustment, discontinuation, and/or blood transfusions. Doses should be reduced until bone marrow recovers if the anemia is significant (hemoglobin less than 7.5 grams/deciliter or reduction of greater than 25% of baseline).

6 The table

doesn't show a much significant difference in gentamicin doses between two groups of patients

Use of gentamicin dose is significantly lower

Dose of 2 mg/kg is higher in noncritically ill patients.

Amikacin and gentamicin dosing in critically and noncritically ill patients

	Critically ill (%)	Non Critically ill (%)	P
Dose of amikacin			
500 mg every 8 h	9/11 (81.8)	2/5 (40)	0.087*
500 mg every 12 h	1/11 (9.1)	3/5 (60)	
500 mg every 24 h	1/11 (9.1)	0/0	
Dose of gentamicin			
(mg/kg)			
5	3/9 (33.3)	0/22	0.003*
4	1/9 (11.1)	0/22	
3	3/9 (33.3)	3/22 (13.6)	
2.5	1/9 (11.1)	2/22 (9.1)	
2	1/9 (11.1)	17/22 (77.3)	

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.

Text 1: What is Yersiniosis?

Yersiniosis is an infectious disease caused by a bacterium of the genus *Yersinia*. In the United States, most human illness is caused by one species, *Y. enterocolitica* (not more than one species often). Infection with *Y. enterocolitica* can cause a variety of symptoms depending on the age of the person infected. Infection with *Y. enterocolitica* occurs most often in young children; adults may be on a safer side. Common symptoms in children are fever, abdominal pain, and diarrhea, which is often bloody. Symptoms typically develop 4 to 7 days after exposure and may last 1 to 3 weeks or longer. In older children and adults, right-sided abdominal pain and fever may be the predominant symptoms, and may be confused with appendicitis. In a small proportion of cases, complications such as skin rashes, joint pains, or the spread of bacteria to the bloodstream can occur.

Y. enterocolitica belongs to a family of rod-shaped bacteria. Other species of bacteria in this family include *Y. pseudotuberculosis*, which causes an illness similar to *Y. enterocolitica*, and *Y. pestis*, which cause plague. Only a few strains of *Y. enterocolitica* cause illness in humans. The major animal reservoir for *Y. enterocolitica* strains that causes human illness is pigs, but other strains are also found in many other animals including rodents, rabbits, sheep, cattle, horses, dogs, and cats. In pigs, the bacteria are most likely to be found on the tonsils.

Infection is most often acquired by eating contaminated food, especially raw or undercooked pork products. The preparation of raw pork intestines (chitterlings) may be particularly risky. Infants can be infected if their caretakers handle raw chitterlings and then do not adequately clean their hands before handling the infant or the infant's toys, bottles, or pacifiers. Drinking contaminated unpasteurized milk or untreated water can also transmit the infection. Occasionally *Y. enterocolitica* infection occurs after contact with infected animals. On rare occasions, it can be

transmitted as a result of the bacterium passing from the stools or soiled fingers of one person to the mouth of another person. This may happen when basic hygiene and handwashing habits are inadequate. Rarely, is the organism transmitted through contaminated blood during a transfusion.

Y. enterocolitica is a relatively infrequent cause of diarrhea and abdominal pain. Based on data from the Food-borne Diseases Active Surveillance Network which measures the burden and sources of specific diseases over time, approximately one culture-confirmed *Y. enterocolitica* infection per 100,000 people occurs each year. Children are infected more often than adults, and the infection is more common in the winter. *Y. enterocolitica* infections are generally diagnosed by detecting the organism in stools. Many laboratories do not routinely test for *Y. enterocolitica*, so it is important to notify laboratory personnel when infection with this bacterium is suspected so that special tests can be done. The organism can also be recovered from other sites, including the throat, lymph nodes, joint fluid, urine, bile, and blood. Uncomplicated cases of diarrhea due to *Y. enterocolitica* usually resolve on their own without antibiotic treatment. However, in more severe or complicated infections, antibiotics such as aminoglycosides, doxycycline, trimethoprim-sulfamethoxazole, or fluoroquinolones may be useful.

There are many things which can be done to prevent the infection or the spread of the infection:

Avoid eating raw or undercooked pork. Consume only pasteurized milk or milk products. Wash hands with soap and water before eating and preparing food, after contact with animals, and after handling raw meat. After handling raw chitterlings, clean hands and fingernails scrupulously with soap and water before touching infants or their toys, bottles, or pacifiers. Someone other than the food handler should care for children while chitterlings are being prepared. Prevent cross-contamination in the kitchen - use separate cutting boards for meat and other foods, carefully clean all cutting boards, counter-tops, and utensils with soap and hot water after preparing raw meat. Dispose of animal feces in a sanitary manner.

Text 1: Questions 7-14

7 Yersiniosis occurs more commonly in;

Children

Americans

Adults

Teens

8 Symptoms such as fever and diarrhea may persist for about;

4 days

7 days

1-3 weeks

More than 3 weeks

9 Plague is caused by;

Y. pestis

Y. enterocolitica

Y. pseudotuberculosis

None

10 One of the following is not a common form of transmission of the parasite;

Contaminated unpasteurized milk

Blood transfusion

Raw or undercooked pork products

After contact with infected animals

11 Paragraph 4 talks about;

Prevention of the disease

Spread of the infection

How common the infection of *Y. enterocolitica* is

Reports by Active Surveillance Network.

12 Paragraph 5 talks about;

Diagnosis

Treatment

Spread of the infection and its control.

A & B

13 Which of these can be derived from Paragraph 5?

Treatment is not required for the infection caused by *Y. enterocolitica*.

Diarrhea requires no treatment

Complications which are mild can be resolved easily.

None

14 What is said about chitterlings?

Handling raw chitterlings with care is necessary

Contamination occurs more due to the careless handling chitterlings

Washing hands with soap before touching infants or their toys is vital

There should be separate caretakers to look after infants, while chitterlings are prepared

Text 2 : What is an MRI scan?

An MRI (or magnetic resonance imaging) scan is a radiology technique that uses magnetism, radio waves, and a computer to produce images of body structures. The MRI scanner is a tube surrounded by a giant circular magnet. The patient is placed on a moveable bed that is inserted into the magnet. The magnet creates a strong magnetic field that aligns the protons of hydrogen atoms, which are then exposed to a beam of radio waves. This spins the various protons of the body, and they produce a faint signal that is detected by the receiver portion of the MRI scanner. The receiver information is processed by a computer, and an image is produced. The image and resolution produced by MRI are quite detailed and can detect tiny changes of structures within the body. For some procedures, contrast agents, such as gadolinium, are used to increase the accuracy of the images.

An MRI scan can be used as an extremely accurate method of disease detection throughout the body. In the head, trauma to the brain can be seen as bleeding or swelling. Other abnormalities often found include brain aneurysms, strokes, tumors of the brain, as well as tumors or inflammation of the spine. Neurosurgeons use an MRI scan not only in defining brain anatomy but in evaluating the integrity of the spinal cord after trauma. It is also used when considering problems associated with the vertebrae or intervertebral discs of the spine. An MRI scan can evaluate the structure of the heart and aorta, where it can detect aneurysms or tears. It provides valuable information on glands and organs within the abdomen, and accurate information about the structure of the joints, soft tissues, and bones of the body. Often, surgery can be deferred or more accurately directed after knowing the results of an MRI scan.

An MRI scan is a painless radiology technique that has the advantage of avoiding x-ray radiation exposure. There are no known side effects of an MRI scan. The benefits of an MRI scan relate to its precise accuracy in detecting structural abnormalities of the body. Patients who have any metallic materials within the body must notify their physician prior to the examination or inform the MRI staff; metallic chips, materials, surgical clips, or foreign material can significantly distort the images obtained by the MRI scanner. Patients who have heart pacemakers, metal implants, or metal chips or clips in or around the eyeballs cannot be scanned with an MRI because of the risk that the magnet may move the metal in these areas. Similarly, patients with artificial heart valves, metallic ear implants, bullet fragments, and chemotherapy or insulin pumps should not undergo MRI scanning. During the MRI scan, the patient lies in a closed area inside the magnetic tube; some patients can experience a claustrophobic sensation during the procedure. Therefore, patients with any history of claustrophobia should relate this to the practitioner who is requesting the test, as well as the radiology staff. A mild sedative can be given prior to the MRI scan to help alleviate this feeling.

All metallic objects on the body are removed prior to obtaining an MRI scan. Occasionally, patients will be given a sedative medication to decrease anxiety and relax the patient during the MRI scan. MRI scanning requires that the patient lies still for best accuracy; patients lie within a closed environment inside the magnetic machine. Relaxation is important during the procedure and patients are asked to breathe normally. Interaction with the MRI technologist is maintained throughout the test and there are loud, repetitive clicking noises which occur during the test as the scanning proceeds. Occasionally, patients require injections of liquid intravenously to enhance the images which are obtained. The MRI scanning time depends on the exact area of the body studied, but ranges from half an hour to an hour and a half.

After the MRI scanning is completed, the computer generates visual images of the area of the body that was scanned. These images can be transferred to film (hard copy). A radiologist is a physician who is specially trained to interpret images of the body. The interpretation is transmitted in the form of a report to the practitioner

who requested the MRI scan. The practitioner can then discuss the results with the patient and/or family.

Text 2: Questions 15-22

15. According to paragraph 1, an image is produced;

When a signal is detected by the receiver portion of the scanner.

When the signal passes through the receiver, after coupling of the protons of the body.

When the signal is identified by the receiver which is accurately processed by a computer.

Only when the information, detected by the receiver is processed by a computer.

16. According to paragraph 1, what is the image like?

Crystal clear with no patches.

Self explanatory

Dense

Well enough to give a clear idea of the structures within the body.

17. According to paragraph 2, an MRI gives a clear idea about;

Brain aneurysms.

Strokes of the brain.

Brain tumours and spinal cord injury.

All

18. An MRI can;

Detect brain tumors.

Give a clear picture of spinal cord injury and other soft tissues related to it.

Give clear pictures to evaluate the structure of the heart and aorta.

All

19. Paragraph 3 talks about;

Detection of the diseases through an MRI scan.

Importance of taking an MRI scan.

Risks of an MRI scan.

None

20. Metallic materials mentioned in paragraph 3 include;

Surgical clips.

Artificial joints, metallic bone plates.

Only metal clips in or around the eyeballs.

A & B

21. Paragraph 4 talks about;

How an MRI is performed.

How a patient prepares for an MRI scan.

How a patient prepares for an MRI scan and how it is performed.

How an MRI scan is different from others.

22 According to paragraph 5, interpreting the images implies;

Identifying the disease through scanning.

Analysis of the disease.

Decoding the report.

All of the above.