OCCUPATIONAL ENGLISH TEST

R000009

READING SUB-TEST – QUESTION PAPER: PARTS B & C

TIME: 45 MINUTES

INSTRUCTIONS TO CANDIDATES

DO NOT open this **Question Paper** until you are told to do so.

One mark will be granted for each correct answer.

Answer **ALL** questions. Marks are **NOT** deducted for incorrect answers.

At the end of the test, hand in this **Question Paper**.

DO NOT remove OET material from the test room.

HOW TO ANSWER THE QUESTIONS

Mark your answers on this **Question Paper** by filling in the circle using a 2B pencil. **Example:** (A) (B) (C)

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. The email about smoking cessation tells hospital staff that they

(A) must familiarise themselves with ways of helping patients.

(B) will receive more support in dealing with certain patients.

(C) should take time to talk to patients about the issue.

To:	All hospital staff
Subject:	Helping patients to stop smoking

Being in hospital is a potentially powerful 'teachable moment' for change. Smokers in hospital are often motivated to quit due to concerns about their health, and most are receptive to smoking cessation advice from hospital staff. An absence of the normal smoking triggers, and access to health professionals for advice, can make quitting easier. Long-term quit rates are significantly improved by hospital-based interventions. Smokers who quit have immediate and substantial health bene its, improved post-operative recovery, reduced length of stay, and lower re-admission rates.

Despite these potential benefits, most hospitalised smokers receive sub-optimal smoking care. Interventions are delivered by busy clinicians in addition to their existing patient care responsibilities, and many feel that discussing smoking cessation is not part of their role. However, smoking cessation support is the responsibility of all clinical staff.

2. The policy states that the labelling of syringes is unnecessary

(A) if only one person is involved in their preparation and use.

(B) if they are required for use immediately after preparation.

(C) if only one is going to be used in a procedure.

Injectable medicines policy

4.3.4 All syringes must be labelled immediately after preparation by the person who prepared them, making sure that volume graduations on syringes are not obscured.

The following exceptions apply:

- In general clinical areas where preparation and bolus administration is one uninterrupted process and the unlabelled product does not leave the hands of the person who prepared it.
- In theatres a scrubbed nurse drawing up and handing a syringe to a surgeon is also considered to be undertaking one uninterrupted process. Only one unlabelled medicine must be handled at one time.
- Where a syringe is a pre-filled medical device used for its intended purpose.

3. The main point of this section of the guidelines is to

(A) explain why patients should consume fluids before surgery.

(B) confirm which patients are allowed to have fluids before surgery.

(C) specify the quantity of fluid that patients may have before surgery.

2.1.4 Pre-operative hydration
Clear oral fluids should be actively encouraged (in whatever quantities the patient requests) up to two hours prior to surgery. This should be considered mandatory in the very old and very young, those in hot environments and those who are pyrexial. After the two-hour deadline for 'free fluids' and right up to the time of surgery, a nurse may still give the patient 30mls of still water. This may be either for patient comfort (should the patient request it unprompted) or to allow the swallowing of any prescribed medications that were not able to be taken before the two-hour deadline. The maximum allowed is 30mls in any given hour. This concession must not be taken as allowing the patient free access to water, as exceeding 30mls per hour of water so close to surgery could delay the operation.

4. The main point of this memo about Entonox is that

(A) it should be used with caution.

(B) its use for certain procedures is prohibited.

(C) it should only be administered by specifically trained staff.

Memo

To: All medical staff

Subject: Entonox

Despite being designated as 'minimal sedation', when Entonox is used in combination with other sedatives or potent analgesia there is an increased risk of moderate sedation.

Any healthcare professional administering Entonox should be trained in its use and familiar with the side effects and contra-indications. Staff should also be aware that Entonox is a habit-forming drug and has been subject to abuse. Documented cases of abuse in this country are rare, but addiction may result in long-term use and this can lead to myelo-neuropathy and serious neurological problems.

Entonox should not normally be considered for procedures such as cannulation or venipuncture, as other more appropriate analgesic techniques, such as topical local anaesthetics and distraction, are proven to be effective. Please contact the Pain Control Service for guidance on other options for procedural pain management, if required.

5. The extract from the guidelines says that hospital doctors should

(A) ask the GP to contact the patient for follow-up treatment.

(B) write to the GP only if follow-up treatment is necessary.

(C) ensure that the GP performs the patient's follow-up.

4.2.6: Hospital Discharge Letters to GPs

A patient episode cannot be regarded as complete until the General Practitioner receives an adequate communication. The letter needs to go the patient's current GP. Where a GP is requested to perform a particular action, such as a follow-up blood test or a prescription, the patient must be aware of this and be instructed to contact the GP practice.

Sometimes discharge letters contain requests such as those mentioned above that are never actioned because the patient does not approach the GP practice. It is neither safe nor reasonable to expect GPs to pro-actively chase patients in order to complete hospital treatments. Hospital doctors have a duty to ascertain that the care they judge to be required is delivered, and although GPs recognise that some follow-up is best performed in the primary-care setting, nevertheless the responsibility for confirming that this has happened must rest with the initiating doctor.

6. The extract from the guidelines on IV cannulae tells us that

(A) they should only be used if non-invasive means of medication are impractical.

(B) obtaining the patient's agreement to their use is desirable but not vital.

(C) consulting over their use is the best way to reduce any risk to the patient.

Insertion and Management of Peripheral IV Cannulae (PIVCs)

Pre-insertion

There must be a clear indication of clinical need for PIVC insertion, to prevent inappropriate insertion and exposure to associated risks. The patient's verbal or implied consent must be obtained, or where this is not feasible, a risk assessment by the healthcare professional must be undertaken regarding the need for examination and treatment. The procedure must then be explained to the patient to ensure that they are informed as to what the procedure entails and that the risk of allergic reaction to products used is minimised. Patients must also be made aware of the importance of keeping the PIVC site clean, dry and intact.

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: Using algorithms to fight hospital infections

Clostridium difficile (C-diff), a deadly bacterium spread by physical contact with objects or infected people, thrives in hospitals, causing 29,000 deaths annually in the USA alone. Traditional methods such as observing hygiene rules and looking out for warning signs often fail to prevent the disease. But what if it were possible to systematically target those most vulnerable to C-diff infection (CDI)? Now, a new algorithm created by Erica Shenoy, an infectious-disease specialist, and Jenna Wiens, a computer scientist, using patients' vital signs and other health records can do just that.

The Shenoy and Wiens' CDI algorithm is based on a form of artificial intelligence called machine learning (ML). Such algorithms, now commonplace in the world of IT, are relatively untested in medicine and healthcare, but as computing power continues to grow exponentially while getting cheaper, change is inevitable. After years of experimentation, its predictive powers are well-established, and it is poised to move into broad real-world applications, said Zeeshan Syed, who directs Stanford University's Clinical Inference and Algorithms Program. 'The implications of ML are profound,' he said. 'Yet it also promises to be an unpredictable, disruptive force, likely to alter the way doctors make medical decisions.'

Shenoy and Wiens' CDI algorithm analysed data from 374,000 inpatient admissions. The records contained over 4,000 distinct variables. 'Now we have data pertaining to everything from lab results to what bed a patient is in, to who's in the bed next to them and whether they're infected.' Wiens said. 'You can imagine, as the patient moves around the hospital, risk evolves over time, and we wanted to capture that.' As it repeatedly analyses this data, the ML process extracts warning signs that an overworked doctor may miss: constellations of symptoms, circumstances, and details of medical history likely to result in infection.

Radiology and pathology will be the first to be affected by the impact of ML, experts say. X-rays, MRI, PET and CT scans are, after all, made up of masses of data. By crunching the data contained in thousands of existing scan images along with the diagnoses made from them, algorithms can distil the collective knowledge of the medical establishment in a matter of hours. This enables them to duplicate or surpass the accuracy of any single doctor. If adopted on a broad scale, such technologies could save both time and money. But such change always comes at a price. 'The fact that we have identified potential ways to cut costs is good news. The problem is the people who are affected aren't going to like it, so there'll be resistance,' said Eric Topol, director of the Scripps Translational Science Institute. 'It undercuts how radiologists do their work. Their primary work is reading scans; what happens when they don't have to do that?' Topol hopes that this shift may not, as many fear, put such specialists out of work. Rather, he says, it'll likely push them to find new ways to apply their expertise. **They** may focus on more challenging diagnoses where algorithms continue to fall short, for instance, or interact more with patients.

Beyond this frontier, algorithms can provide a more precise prognosis for the course of a disease, potentially reshaping treatment of progressive ailments or addressing the uncertainties in end-of-life care. They can anticipate both fast-moving infections like CDI and chronic ailments such as heart failure. ‘Once algorithms can anticipate incipient stages of conditions like heart failure, doctors will be better able to offer treatments tailored to the patient’s circumstances,’ says Walter Stewart, chief research officer at Sutter Health.

Despite its scientific promise, ML in medicine remains controversial. It adds a new voice – the voice of the machine – to key medical decisions, and doctors and patients may be slow to accept that. Adding to these doubts, ML is often a black box: Data goes in, and answers come out, but it’s often unclear why. Doctors will rely on these increasingly complex tools to make decisions, but have no idea how they work. Even the scientists who programme these networks are often unaware of exactly how they reach their conclusions. And, in some cases, it will be hard to figure out why bad advice was given.

And while health data is proliferating, the quantity, quality and format vary wildly, and that affects the algorithms’ performance. One size doesn’t fit all: An algorithm developed with data from one hospital or health system may not work well for another. And because the data isn’t curated for research purposes, but collected as a by-product of care in day-to-day operations, and utilised mainly for billing and reimbursement purposes, it is very, very **noisy**. And still the tide of available medical data continues to rise, tantalising scientists. As Wiens says. ‘These data are valuable in ways we can’t yet know.’

Text 1: Questions 7-14

7. The work of Shenoy and Wiens on *clostridium difficile* aimed to address

(A) deficiencies in existing approaches to its treatment.

(B) problems with identifying individuals at risk of contracting it.

(C) issues with previous attempts to use computers in diagnosis.

(D) failings associated with monitoring and record keeping sytems.

8. How does Zeeshan Syed feel about using ML in health care?

(A) relieved that it has finally been accepted for use.

(B) unsure about its reception by medical professionals.

(C) confident that it has already proved its potential worth.

(D) concerned that it will cause more problems than it solves.

9. What is suggested in the third paragraph about Shenoy and Wiens' CDI algorithm?

(A) It is able to replicate the way the human brain analyses risk.

(B) It makes use of data previously regarded as unreliable by doctors.

(C) It is unaffected by the pressures medical professionals work under.

(D) It has the capacity to deal with many more patients than a doctor can.

10. What effect of the increased use of ML is described in the fourth paragraph?

(A) the benefits that it offers.

(B) the limitations that lack of data impose.

(C) the likelihood that it will lead to many job losses.

(D) the disruption faced by certain hospital departments.

11. What does the word '**<u>they</u>**' refer to in the fifth paragraph?

(A) potential job losses.

(B) new uses of algorithms.

(C) some types of specialists.

(D) ways of applying expertise.

12. What does Walter Stewart identify as a potential benefit of medical algorithms?

(A) customised healthcare programmes.

(B) better quality end-of-life care for patients.

(C) earlier commencement of treatment plans.

(D) improved survival rates for certain conditions.

13. What controversy about ML does the writer mention in the seventh paragraph?

(A) problems in analysing why something goes wrong.

(B) poor levels of understanding of how it works by patients.

(C) the potential lack of any personal dimension to health care.

(D) a shift in responsibility away from doctors towards scientists

14. The writer uses the word '**<u>noisy</u>**' in the final paragraph to emphasise

(A) the difficulty of knowing what data will be useful in the future.

(B) the problems involved in transferring data between institutions.

(C) the poor quality of some of the data that is available for analysis.

(D) the fact that much of the data analysed by algorithms is unhelpful.

Text 2: Improvements to daily rounds

At Seattle Children's Hospital, we conduct patient rounds at the Pediatric Intensive Care Unit (PICU) each morning to review and evaluate patient data from the night before and develop care plans for the day. Prior to a recent improvement project, rounds took nearly four hours each day. Length and content varied between attending physicians and the expectations of each person's role were insufficiently explicit. Previous improvement attempts had failed to achieve sustained results. This was attributed to the lack of formal quality improvement training for the care team, a lack of consensus about the purpose of rounds, a missing focus on patient and family needs, limited leadership support, and the absence of data to assess the impact of changes.

For some years, the expectation has been that daily rounds will include a review of patient care Quality and Safety (Q&S) indicators. For the PICU, these include removal of catheters that are no longer needed, the ordering of interpreters where necessary and the discontinuation of unnecessary diagnostic tests. Before the project began, there was no documentation for ensuring that all Q&S questions were asked for every patient daily. So, it was decided to incorporate this best practice into rounds.

As part of the project, we introduced a formal schedule of rounds. This meant that families knew exactly when the care team would be arriving to discuss their child. It also gave sub-specialty providers a clear idea of when their patients were scheduled for assessment, thus decreasing time spent waiting for care team members to join rounds. While implementing a schedule represented additional work for attending physicians, the benefits to nursing staff and families, along with the ability to recognise when rounds were being delayed, outweighed this.

Other interventions included collecting and displaying data about the duration of rounds and creating standard work (scripting) for what specific information should be presented on rounds by each member of staff. Additionally, complex family conversations and the majority of academic teaching were taken 'outside of rounds'. ~~**This practice**~~ allowed for increased focus on each later in the day, whilst keeping rounds focused on making and implementing the plan of care.

It was also decided that better use should be made of the 'Additional Attending' role. Previously, this medic had been on standby in the PICU and was rarely called for routine work, while rounding teams were frequently interrupted, thereby increasing rounding time. The responsibilities of the new 'Resource Attending' role included assisting primary-care teams with unit management, managing critically ill patients outside the PICU and admitting new patients to the PICU during rounding times. The idea was that by switching from a 'push' model of delivering work to the Resource Attending to a 'pull' model requiring the medic to seek specific work, the rounding teams could focus more on their rounds. The intervention was a success.

Another initiative was a Plan of the Day (POTD) form which included the plan of care, resident contact information, and the Q&S checklist. The idea was to post this in each patient's room. In practice, however, nursing staff needed to have the resident contact information readily available, so couldn't quickly retrieve the POTD if it was there, particularly if the patient was under an isolation protocol. So, as a compromise, it was posted outside each room. Its introduction did, however, create accountability around the advancement of patient care. Overnight nurses, who weren't involved in daily rounds, could review the POTD and prompt the care team to address any incomplete items. Due to recent changes to the electronic medical record, the Q&S checklist and contact information are now completed electronically. So, the POTD paper form is no longer needed, and the team is revising daily care-plan documentation.

As a result of the improvement project, rounding times are now relatively stable at around two hours. Average rounding time is 11-14 minutes per patient with the ability to catch up on some patients when care discussions are longer on others. We've ensured that daily variability is driven by patient complexity, not by the style or wishes of individual providers. The Q&S checklist is now a routine part of rounds. We're now focusing on determining whether there's a direct correlation between intentionally asking these questions and declining levels of patient infection. Patient satisfaction scores improved last year, but have since plateaued. Focused work is happening to engage the team and further improve the results.

One of the guiding principles of the project was that it shouldn't create extra work for an already busy faculty. So it was necessary to incorporate data collection into daily work through self-auditing rather than external observers. It's possible that the auditing process in and of itself may have introduced **bias** and caused providers to shorten rounds. Whether improvement was directly a result of the structural changes or an indirect effect of measurement, both would have a positive effect on the overall goal of increasing rounding efficiency.

Text 2: Questions 15-22

15. What do we learn about rounds in the PICU prior to the improvement project?

A Previous efforts to shorten them had met with resistance.

B The time at which they were carried out varied.

C Staff lacked training in how to conduct them.

D No clear aims for them had been agreed.

16. What was the problem with including Quality and Safety indicators in daily rounds?

A It was extending the time that was needed to complete them.

B There was no detailed record of their implementation.

C Those chosen for the PICU were difficult to evaluate.

D The way they were recorded was out of date.

17. The writer says that the introduction of a formal rounding schedule meant that

A delays on rounds could easily be identified and the reasons investigated.

B families could be more involved in the planning of their child's care.

C specialised staff knew when they were needed during rounds.

D nurses spent less time liaising with rounds staff beforehand.

18. The phrase '**<u>This practice</u>**' in the third paragraph refers to

A omitting certain activities from daily rounds.

B changing the method of delivering staff training.

C preparing a script for given information on rounds.

D choosing the most appropriate staff to brief families.

19. As a result of changes to the role, the standby attending doctor

(A) interrupted the rounding teams less frequently.

(B) undertook work which was new for PICU staff.

(C) took on fewer routine tasks.

(D) became more proactive.

20. What unexpected difficulty arose with the use of a 'Plan of the Day' form?

(A) Displaying it in a patient's room limited staff access to vital information it contained.

(B) Using it with patients who needed to be isolated risked breaking rules.

(C) It failed to take account of certain tasks performed by overnight staff.

(D) It couldn't easily be integrated with electronic records.

21. The team is pleased that, as a result of the improvement project,

(A) patient satisfaction has continued to rise steadily.

(B) time spent with each patient on rounds has been standardised.

(C) the time that rounds take now depends on the needs of the patient.

(D) the implementation of a checklist has led to a drop in infection rates.

22. In the final paragraph, what is the '**bias**' that the writer refers to?

(A) Only data which supported structural change was collected.

(B) Staff omitted some tasks in the audit to avoid increasing their workload.

(C) The decision to self-audit led to a more favourable assessment of rounds.

(D) Staff did rounds more quickly knowing they had to document the time taken.

END OF READING TEST
THIS BOOKLET WILL BE COLLECTED