The short answer questions (SAQ) remain the best discriminator between the candidates who perform well in the written examination and those who do not. Insufficient knowledge or depth of knowledge is a key factor in poor performance. However, SAQs are designed to test not only the candidates’ knowledge, but also their ability to apply this knowledge to higher order thinking that is used in everyday obstetric and gynaecological practice. Examples of higher cognitive thinking include: the ability to apply evidence or guidelines to unusual clinical situations, or to be able to evaluate the benefits and disadvantages of different treatments.

A consistent major error in exam technique is failure to answer the question asked. This is evidenced either by candidates failing to use the context of the case scenario provided or by not correctly interpreting the “direction” words about how the question is to be answered. Many candidates include irrelevant information in addition to answering the question, which wastes the time available to complete the examination. Tables and bullet points are efficient methods to minimise volume of writing.

In addition it is critical that candidates look at the number of marks allocated to each part of the question and to limit their answers appropriately. In general there is 1 mark allocated for each fact requested. If half marks are to be allocated then the question will indicate this; for example, list 8 factors (4 marks). Model answers are available at: https://www.ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Training%20and%20Assessment/Examinations/SAQ/FRANZCOG-Written-Examination-SAQ-guide.pdf

When preparing for the MRANZCOG examination, candidates must have meticulous knowledge of the contents of the RANZCOG Curriculum as it forms the basis for both the breadth and the depth of knowledge that is tested. It is available on the RANZCOG website at https://www.ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Training%20and%20Assessment/Specialist%20Training/Curriculum%20and%20Handbook/RANZCOG-Curriculum.pdf. To assist with learning, candidates are advised to know the content of the RANZCOG Statements. These are regularly written and revised and contain evidence-based care recommended for practice in Australia and New Zealand.

In addition, evidence-based guidelines published by other learned bodies both in Australia and New Zealand e.g. Society of Obstetric Medicine in Australia and New Zealand (SOMANZ) and internationally e.g. RCOG Green-top Guidelines and NICE Guidelines are very informative and often form the basis for clinical practice in Australia and New Zealand. Globally, WHO/UNICEF Statements strongly influence core maternal and reproductive health issues. Recommended reading resources also include recent editions of O&G Review and ANZJO. Candidates fail this examination because of deficiencies in their knowledge base, answering with information which does not address the specific question asked and by failing to relate their answer to the clinical scenario provided.

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MRANZCOG SAQ Coordinators
Question 1

A 25 year old woman is undergoing a caesarean section for an abnormal CTG. After delivery of the baby you find an enlarged ovary that is cystic and solid in nature with a few papillary excrescences on the surface. You suspect this could be a borderline tumour.

a. Describe the intra-operative options available to confirm the diagnosis and assess the disease in this setting? (6 marks)

b. Initial biopsy confirms a serous borderline tumour. How would you counsel the patient about this condition, her treatment and follow up? (9 marks)

Comment

Candidates must have a clear understanding of the principles of management of unexpected pathology found at surgery. In this question, a diagnosis of suspected borderline ovarian tumour must be obtained through appropriate biopsy. Responses such as TAHBSO or lymph node dissection without appropriate counselling were unacceptable. Appropriate patient counselling and follow up of borderline ovarian tumour was essential to obtain full marks.

Question 2

Alison and Richard are referred to you for assessment of primary infertility.

a. Define infertility in the context of this couple. (1 mark)

Alison is aged 38 years. She has a regular 32 day cycle. Her baseline investigation results are as follows (normal ranges in brackets):

Day 3 FSH 14 U/L (3-10)
Day 21 Progesterone 14 nmol/L (>15)
Rubella Immune
Testosterone 0.9 nmol/L (0.2-1.8)
Serum hormone binding globulin 78 nmol/L (30-110)
Free androgen index 1.2% (0.3-4.0)
AMH 7 pmol/L (14-30)
TSH 5.0 mU/L (0.5-4.5)
Prolactin 175 mIU/L (150 – 450)

b. Interpret these results. (3 marks)

c. Richard smokes 20 cigarettes per day and he also uses marijuana daily. His semen analysis findings are as follows (normal ranges in brackets):

Volume: ... 1.5 ml (>1.5 ml)
Sperm concentration: ... 14 million /ml (> 15 million/ml)
Total sperm number per ejaculate: ... 21 million (>39 million)
Morphology: ... 3% normal forms (>4%)
Vitality: ... 60% live (>58%)
Motility – progressive: ... 20% (>25%)
Total motility (progressive + non-progressive): 40% (>50%)

Richard comes to you for a follow-up consultation regarding his semen analysis results. Discuss the important issues you should counsel him about. (7 marks)

d. Alison asks about having her tubes checked.

i) List 3 investigations that could be used to check Alison’s tubes. (1 mark)

ii) List an advantage for each investigation. A different advantage must be given for each investigation. (1.5 marks)
iii) List a disadvantage for each investigation. A different disadvantage must be given for each investigation. (1.5 marks)

You may use a table to answer the question.

**Comment**

Primary infertility is a common presentation to the gynaecologist and candidates must know and understand routine investigations for infertile couples. In the first part of the question, candidates were asked to comment on the female’s routine (abnormal) blood results. Practical considerations were required, for example, the timing of serum progesterone for a 32-day menstrual cycle. Male infertility factors are essential knowledge and the majority of the marks for this question were allocated to the male’s semen analysis results and how lifestyle factors may affect sperm quality. The last part of the question related to tests for tubal patency; candidates should be aware of all available imaging investigations in obstetrics & gynaecology, and their pros and cons.

**Question 3**

A 39 year old para 3 woman presents with regular and heavy periods of 4 years duration, iron deficiency anaemia and failed medical treatment. Her transvaginal pelvic ultrasound (day 7) indicates a normal sized uterus with an endometrial thickness of 4 mm and normal ovaries.

a. List the relevant aspects from her history that will influence your management options. Include examples in your answer where relevant. (4 marks)

b. She has heard about endometrial ablation as a treatment for heavy periods and wants to know about the risks associated with having it done. What are the short term (5 marks) and long term (2 marks) complications specific to second-generation endometrial ablation? (Total 7 marks)

c. At pre-operative assessment she is noted to have a very stenosed cervix. Outline strategies to prevent uterine perforation in this scenario. (4 marks)

**Comment**

In this question on menorrhagia, a focussed history relating to the menorrhagia per se was required, as well as the general medical and obstetric & gynaecology history, so that appropriate options for management may be determined. Candidates should know about operative treatments for menorrhagia including first- and second-generation endometrial ablation techniques, and short- and long-term complications. The last part of the question related to strategies to avoid uterine perforation with a stenosed cervix, not an uncommon problem for the gynaecologist; this section was poorly answered.
Question 4

a. List the causes of a vesico-vaginal fistula. (4 marks)

A 45 year old woman underwent an abdominal hysterectomy. One week later she attends your clinic complaining of a watery loss on her underwear.

b. How would you diagnose a vesico-vaginal fistula? (8 marks)

c. List the treatment options if a vesico-vaginal fistula is diagnosed. (3 marks)

Comment

Gynaecological fistulae is a syllabus topic and required knowledge – more than any other question in this examination, examiners reported that many candidates did not read this question and wrote paragraphs of peripheral information irrelevant to the question. For example, the patient suffered a vesico-vaginal fistula after an abdominal hysterectomy but many candidates wasted time discussing obstetric and malignant fistulae. In addition, “list treatment options” does not warrant detailed descriptions of surgical techniques (bullet points are sufficient).

Question 5

An obese (BMI 45) 53 year old woman presents with a single episode of vaginal bleeding. Her last period was three years ago. She has minimal symptoms of the menopause and has not used hormone replacement therapy. She is otherwise well. Bimanual pelvic examination is normal. Her last Pap smear 18 months ago was normal.

a. List the 4 most common causes of post-menopausal bleeding. (4 marks)

b. She is concerned that she has cancer. What are you going to advise her? (5 marks)

Histopathology of curettings show “atypical complex endometrial hyperplasia”.

c. List and justify the management options for this woman. (6 marks)

Comment

The causes of postmenopausal bleeding and the risk of uterine malignancy are basic knowledge requirements for candidates. Management options for atypical complex endometrial hyperplasia was, on the whole, poorly answered. Progesterone treatment was often overlooked. Appropriate management of the adnexae in the postmenopausal woman undergoing hysterectomy is described in the RANZCOG College Statement C-Gyn 25: Managing the adnexae at the time of hysterectomy for benign gynaecological disease. Inappropriate answers include: chemotherapy (cancer not confirmed) and conservative management or endometrial ablation (both contraindicated).
Question 6

a. List 5 epidemiological or predisposing factors that may be associated with an increased risk of ovarian torsion. (5 marks)

A 26 year old nullipara presents to the Emergency Department with vomiting and acute onset severe left sided lower abdominal pain of 6 hours duration. She is 9 weeks gestation with an IVF pregnancy. Transvaginal ultrasound on admission shows “a left sided 8 cm ovarian mass with features highly suggestive of ovarian torsion”. The intrauterine pregnancy is viable and consistent with dates.

b. With respect to the ultrasound findings of “a left sided 8 cm ovarian mass with features highly suggestive of ovarian torsion”,
   i) Describe 3 ultrasound features commonly associated with ovarian torsion. (3 marks)
   ii) Discuss 2 limitations with ultrasound diagnosis of ovarian torsion. (2 marks)

You perform a laparoscopy 3 hours after she presented to the Emergency Department. The ovary is blue/black and twisted 1-3 times around the infundibulopelvic and utero-ovarian ligaments.

c. Justify your decision to preserve this ovary at surgery. (5 marks)

Comment

Ovarian torsion is a gynaecological surgical emergency and prompt action is essential to prevent gonadal loss. An adnexal mass is the most common predisposing factor for torsion but candidates should know the other factors important to elucidate in the history of presentation. Pelvic ultrasound is the most important diagnostic investigation for torsion but its limitations must be appreciated. Conservative management is based on the facts that torted ovaries look blue/black due to haemorrhagic engorgement (not necrosis) and that time of torsion is a more reliable predictor of viability than the ovarian appearance.

Question 7

a. In both Australia and New Zealand national perinatal outcome statistics are published in annual reports.
   i) Define stillbirth. (1 mark)
   ii) Define perinatal mortality rate. (1 mark)
   iii) What is the current published perinatal mortality rate in Australia or New Zealand? (1 mark)

A 28 year old primigravid, Jane presents at 40 weeks with reduced fetal movements. The midwife is unable to find a fetal heart rate with cardiotocography. Absent fetal heart motion is confirmed using real-time ultrasound by both yourself and a senior colleague. No further maternal risk factors are identified after you take a detailed history and examination.

b. List and justify the core investigations recommended at the time of diagnosis of fetal death to optimise the ascertainment of the cause of death. (8 marks)

Following the delivery of her baby daughter Ellen, Jane and her partner are counselled and a postmortem is recommended.

c. Discuss in detail the reasons/justification for this recommendation. (4 marks)

Comment

Both Australia and New Zealand use the RANZCOG endorsed PSANZ Guideline for Perinatal Mortality as the basis for health policy in the management of stillbirth. This document contains a glossary of
definitions and algorithms which summarise investigations and management of stillbirth and autopsy available at:  https://www.psanz.com.au/guidelines/

Question 8

a. What are the significant medical risks associated with prolonged pregnancy? (4 marks)
b. Discuss your management of induction of labour in an uncomplicated primigravid patient at 41 weeks gestation with certain dates. A recent ultrasound confirmed a cephalic presentation and estimated the fetal weight to be 3.6kg with normal amniotic fluid volume and a placenta that is not low lying. (7 marks)
c. One hour after insertion of 2mg vaginal prostaglandin E2 gel, the woman is experiencing 5 strong contractions in 10 mins and fetal heart rate changes on a cardiotocograph. Outline your management of this situation. (4 marks)

Comment

Candidates must be able to discuss in their routine management of post-dates pregnancy including communication, sweeping of membranes, timing of induction, pre-induction assessment of cervix and fetus, methods for both favourable and unfavourable cervical assessment and failed induction. An organised and logical approach was required. Management of iatrogenic hyperstimulation included the definition, exclusion of other causes, methods of reversal including suitable drugs for tocolysis and mode of delivery. The NICE guidelines on Induction of Labour and the RANZCOG Statement C-Obs 22 Use of prostaglandins for cervical ripening prior to the induction of labour are appropriate resources.

Question 9

a. Outline 2 current limitations in evidence with respect to thromboprophylaxis practice in obstetrics. (2 marks)

You have just performed an elective Caesarean section on a 30 year old primigravid woman at 39 weeks gestation. She has not been on antenatal thromboprophylaxis and has no personal or family history of venous thromboembolism (VTE) or thrombophilia. You are assessing her risk profile for postpartum thromboprophylaxis.
b. List 8 clinical risk factors possible in this clinical scenario, for which it would be appropriate to consider low molecular weight heparin (LMWH) for ≥5 days or until she is fully mobile. (8 marks)
c. Compared with unfractionated heparin (UFH), justify the use of LMWH in this patient. (3 marks)
d. If this patient had no additional risk factors, how would you manage her risk for VTE? (2 marks)

Comment

Thromboprophylaxis practice in obstetrics is consensus-based due to a lack of good quality evidence. Nevertheless, in February 2012 AJROG published guidelines endorsed by the Councils for the Society of Obstetric Medicine of Australia and New Zealand (SOMAZ) entitled Recommendations for the prevention of pregnancy-associated venous thromboembolism. This question required knowledge and practical application of these recommendations.

Question 10
a. Early pregnancy screening for maternal thyroid dysfunction is recommended in geographic regions with iodine deficiency. Explain the physiology and pathophysiology that justifies this statement. (4 marks)

b. List the adverse effects of overt hypothyroidism on
   i) Maternal obstetric outcome (3 marks)
   ii) Fetal development (3 marks)

A woman with no relevant past medical history has a TSH level of 0.05 (Normal range is 0.1-2.5mU/L) on first trimester screening bloods. She has no clinical signs or symptoms of overt hyperthyroidism.

c. Describe the physiological changes that occur in thyroid metabolism during normal pregnancy which may explain this result. (2 marks)

d. How would you manage this TSH result? (3 marks)

Comment

An understanding of the physiological factors affecting iodine metabolism in pregnancy and the effect of severe iodine deficiency and hypothyroidism on both maternal and fetal health was expected. These issues and the measuring and interpretation of TSH during pregnancy are discussed in detail in the RANZCOG Statement C-Obs 46 Testing of serum TSH levels in pregnant women, published in July 2012.

Question 11

a. Explain the classification of obstetric perineal injuries. (5 marks)

You are asked to review a primiparous woman in the labour ward who has just delivered and sustained an extensive anal sphincter tear which extends into the anal canal.

b. Outline the surgical principles (4 marks) and choice of suture material (2 marks) you would use.

c. What advice would you give regarding subsequent pregnancies? Justify this advice. (4 marks)

Comment

Perineal trauma is a daily event in obstetrics and candidates are expected to know and understand this syllabus topic. The RCOG Green-top guideline The Management of Third- and Fourth-Degree Tears covers the subject in detail.
Question 12

a. Puerperal sepsis has been identified as an important cause of maternal mortality in developed countries.
   i) Define puerperal sepsis. (1 mark)
   ii) What two clinical endpoints are associated with mortality in puerperal sepsis? (2 marks)

A 24 year old woman complains of feeling generally unwell at 2 days postpartum. She had an uncomplicated pregnancy and a vacuum assisted delivery at term following a spontaneous labour. Her immediate postpartum course has been uncomplicated.

Vital signs:
   Blood pressure: 85/50 mmHg
   Pulse rate: 120 beats per minute
   Respiratory rate: 38 breaths per minute
   Temperature: 39°C

b. List 4 likely conditions which may cause severe postpartum sepsis outside the genital tract. (4 marks)

History and examination reveal that she has a vaginal discharge and severe abdominal tenderness. You are concerned that she may have Group A streptococcus.

c. Discuss your immediate management of this patient. (8 marks)

Comment

Group A streptococcus causing severe puerperal sepsis has been increasing as a cause of significant maternal morbidity and mortality in developed countries. Prompt diagnosis and management of postpartum septic shock is critical in this context. The RCOG Green-top guideline Bacterial sepsis following pregnancy is a useful resource on this topic.

END OF EXAMINATION