

**APPENDIX H:  
SBMA WRITTEN EXAMS AND CASE STUDIES FOR  
THIRD-YEAR RESIDENT PHYSICIANS**

## SBMA Written Exams and Case Studies for Third-Year Resident Physicians

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# Written Evaluation

## OBGYN RY3

### **Critical Thinking**

- 1) From which embryonic structure does the lower vagina arise?
  - a. genital ridge
  - b. urogenital sinus
  - c. mullerian ducts
  - d. mesonephric ducts
  
- 2) The ovarian artery is a main branch of which of the following arteries?
  - a. aorta
  - b. internal iliac artery
  - c. external iliac artery
  - d. common iliac artery
  
- 3) Which of the following terms best describes the pelvis type with convergent sidewalls and anteroposterior diameter greater than the transverse?
  - a. android
  - b. gynecoid
  - c. anthropoid
  - d. platypelloid

### **Ambulatory Care**

- 4) What is the mechanism of action of oral contraceptives?
  - a. prevent ovulation
  - b. impair passage of sperm into the uterus
  - c. cause endometrium to be unfavorable to implantation
  - d. all of the above
  
- 5) Which of the following is increased by oral contraceptive use?
  - a. bone density
  - b. endometrial cancer
  - c. ovarian cancer
  - d. salpingitis
  
- 6) Which of the following is NOT a mechanism of action of the copper intrauterine device?
  - a. spermicidal action
  - b. prevention of ovulation
  - c. local inflammatory reaction of endometrium
  - d. prevention of fertilization

### **Reproductive Endocrinology**

- 7) The autoimmune component of endocrinopathies may be initiated by which of the following?
  - a. environmental factors
  - b. genetic predisposition
  - c. viral infection
  - d. all of the above

- 8) What medical condition most strongly predisposes a woman to postpartum thyroid dysfunction?
- diabetes type I
  - lupus erythematosus
  - psoriasis
  - renal insufficiency
- 9) What syndrome is caused by pituitary ischemia and necrosis secondary to obstetrical blood loss?
- Kalman syndrome
  - Hing syndrome
  - Morris syndrome
  - Sheehan syndrome
- 10) Thyrotoxicosis in pregnancy may be associated with elevated levels of all of the following EXCEPT
- autoantibodies
  - thyroxine (T4)
  - thyrotropin (TSH)
  - triiodothyronine (T3)
- 11) Which of the following is NOT associated with elevated serum levels of thyroxine?
- gestational trophoblastic disease
  - Graves disease
  - hyperemesis gravidarum
  - subclinical hyperthyroidism
- 12) What is the physiological role of calcitonin?
- increases serum calcium levels
  - decreases serum calcium levels
  - maintains steady calcium levels
  - has no effect on calcium levels

### Gynecology

- 13) Of the following, which is the best treatment for Chlamydia cervicitis in pregnancy?
- tetracycline, 500 mg po qid x 7 days
  - erythromycin base, 500 mg po qid x 7 days
  - ciprofloxacin, 500 mg po bid x 14 days
- 14) Choose the INCORRECT statement
- polymenorrhea is a menstrual cycle interval of less than 21 days
  - oligomenorrhea is a menstrual cycle interval of more than 37 days
  - amenorrhea is the absence of menstrual bleeding for more than 12 months
  - postmenopausal bleeding is uterine bleeding occurring more than 12 months after the last menstrual period in a postmenopausal woman
- 15) Which of the following can produce dysfunctional uterine bleeding (DUB)?
- hypothyroidism
  - hyperthyroidism
  - hyperprolactinemia
  - all of the above
- 16) Choose the INCORRECT statement
- women find most breast masses themselves, either by chance or during self-breast examination
  - two thirds of breast masses found during the reproductive years are benign
  - fibroadenomas are the most common benign breast tumors and are typically seen in women younger than 30 years
  - multiple fibroadenomas are found in the same patient in approximately 50% of cases

- 17) A 23-year-old patient presents with a 2- to 3-cm firm, painless, freely movable mass in her left breast. She reports that the mass does not change during her menstrual cycle and has grown slowly over the past year. The patient found the mass during breast self-examination. What is the most likely diagnosis?
- intraductal carcinoma
  - fibroadenoma
  - ductal ectasia
  - fibrocystic change
- 18) Which of the following statements about the management of suspected fibroadenomas is INCORRECT?
- ultrasound is not useful in distinguishing fibroadenomas from breast cysts
  - surgical excision is indicated if the breast mass is painful
  - surgical excision is indicated if the breast mass is rapidly growing
  - fine-needle aspiration may provide sufficient information to allow management by frequent examination and mammographic evaluation
- 19) The advantage of mammography is that it can
- identify suspicious lesions 2 or more years before they are palpable
  - assess the degree of spread of malignancy
  - differentiate between benign and malignant conditions
  - provide reassurance about suspicious masses
- 20) The accuracy of mammography in diagnosing breast cancer is approximately
- 45%
  - 65%
  - 85%
  - 100%
- 21) Your patient with a pregnancy at 8 weeks' gestation by last menstrual period presents with vaginal bleeding and complaints of lower abdominal pain. She is afebrile and isovolemic. Physical examination reveals a closed cervical os and 6-week size, soft, nontender uterus. An appropriate next management step includes which of the following?
- reassurance and bed rest
  - ultrasonographic examination
  - Doppler auscultation of fetal heart tones
  - Measurement of serum progesterone level
- 22) Which of the following is most commonly associated with spontaneous abortion?
- aneuploidy
  - listeriosis
  - antiphospholipid syndrome
  - anti-Kell antibodies
- 23) A 44-year-old woman presents to your office with a 6-month history of menometrorrhagia. She reports having undergone an appendectomy and two Cesarean sections in the past 5 years. While performing a physical examination, you discover a suprapubic mass that is later verified by ultrasonography to be a uterine leiomyoma 5 x 5 cm in dimension. The patient elects total abdominal hysterectomy as definitive treatment. An appropriate precaution to take before this surgery is
- instructing the patient to shave the anticipated incision site before surgery
  - having the bowel prepared with oral antibiotics and a cathartic agent
  - instructing the patient to refrain from sexual intercourse 2 weeks before the date of surgery
  - hospitalizing the patient preoperatively to control infection risk

24) A 62-year-old woman undergoes a radical hysterectomy for pelvic organ prolapse. On the second postoperative day, the patient develops a low-grade fever and complains of dysuria. You suspect a urinary tract infection. The next step in management should be

- a. obtain a urine culture and start a 7-day course of levofloxacin
- b. obtain blood and urine cultures, beginning appropriate antibiotics when culture results are reported
- c. obtain blood and urine cultures, then start metronidazole
- d. obtain urine cultures and start a 7-day course of amoxicillin

25) Following an uneventful total abdominal hysterectomy for symptomatic uterine leiomyomata, a 47-year-old otherwise healthy patient is seen on morning rounds 24 hours after surgery. The estimated operative blood loss was approximately 1500 mL. Current vital signs reveal that she is afebrile, has a blood pressure of 110/80 mm Hg (consistent with her preoperative blood pressure), and does not appear to be in distress. Orthostatics reveal a positive tilt test. Her postoperative hemoglobin, checked 24 hours after surgery is 8 mg/dL. The best initial treatment for this patient is

- a. packed red blood cells (1 to 2 units)
- b. crystalloid infusion (1 to 2 L)
- c. colloid solution (50-100 mL 25% albumin)
- d. observation

### **Obstetrics**

26) Which of the following changes in cardiac sounds is commonly found during pregnancy?

- a. muffling of the first heart sound
- b. wide splitting of the second heart sound
- c. systolic murmur
- d. diastolic murmur

27) Which of the following is decreased during normal pregnancy?

- a. glomerular filtration rate
- b. renal plasma flow
- c. creatinine clearance
- d. serum concentration of urea nitrogen

28) What is the approximate weight of the fetus at 28 gestational weeks?

- a. 750 g
- b. 890 g
- c. 1100 g
- d. 1500 g

29) Which of the following fetal vessels empties directly into the inferior vena cava?

- a. umbilical vein
- b. portal vein
- c. ductus venosus
- d. hepatic vein

30) The fetal death rate following amniocentesis approximates which of the following?

- a. 1:100
- b. 1:200
- c. 1:400
- d. 1:500

31) Levels of MSAFP are influenced by which of the following maternal factors?

- a. race
- b. diabetic status
- c. maternal weight
- d. all of the above

- 32) What is an advantage of transcervical chorionic villous sampling compared with second-trimester amniocentesis?
- lower fetal death rate
  - test results received at an earlier gestational age
  - able to perform even if vaginal bleeding is present
  - able to perform on an extremely anteverted or retroverted uterus
- 33) In a contraction stress test, all of the following may be a source of contractions except
- oxytocin
  - fundal massage
  - nipple stimulation
  - spontaneous onset
- 34) The modified biophysical profile is described by which of the following?
- contraction stress test and Doppler umbilical artery velocimetry
  - acoustic stimulation nonstress test and amniotic fluid index determination
  - acoustic stimulation nonstress test and Doppler umbilical artery velocimetry
  - none of the above
- 35) Contraindications to induction of labor include all EXCEPT which of the following?
- macrosomia
  - prior classical cesarean delivery
  - placenta previa
  - fetal renal anomaly
- 36) At what gestational age does the uterine response to oxytocin increase?
- 6 to 10 weeks
  - 10 to 18 weeks
  - 20 to 30 weeks
  - 32 to 36 weeks
- 37) Ultrasonographic evidence pointing to the diagnosis of monochorionicity includes which of the following?
- "T" sign
  - two separate placentas
  - twins with different gender
  - dividing membrane >2mm thick
- 38) Which of the following ultrasonographic views is used to measure the biparietal diameter?
- transthalamic
  - transcerebellar
  - transventricular
  - transhemispheric
- 39) The four-chamber view of the heart is seen transversely at which fetal body level?
- 4<sup>th</sup> rib
  - T-8 vertebra
  - Immediately above the diaphragm
  - Branching of the main stem bronchus

- 40) Which of the following characterizes women who receive continuous emotional support during labor?
- deliver by cesarean section more often
  - request epidural analgesia more often
  - need oxytocin during labor more often
  - experience less pain
- 41) What is the mechanism of action of naloxone hydrochloride?
- stimulates acetylcholinesterase
  - displaces narcotic from specific receptors
  - inhibits muscarinic receptors
  - blocks B-receptors
- 42) Which nerve roots are responsible for the pain of vaginal delivery?
- T10, T11
  - T11, T12
  - T10, T11, T12, L1
  - S2, S3, S4
- 43) Breast feeding is contraindicated with which of the following maternal infections?
- hepatitis C
  - hepatitis B
  - active, untreated tuberculosis
  - cytomegalovirus infection
- 44) A typical clinical finding regarding mastitis includes which of the following?
- severe breast pain
  - bilateral breast involvement
  - progression to abscess formation
  - breast skin ulceration

### **Oncology**

- 45) The use of preoperative adjuvant therapy in patients with squamous cell vulvar carcinoma is generally recommended for
- patients with suspicious groin nodes
  - locally advanced disease or lesions encroaching on midline structures where surgical removal is accompanied by significant morbidity
  - poorly differentiated histologic type in stage 1 disease
  - multifocal lesions in stage 1 disease
- 46) Experts generally recommend traditional cold knife cone biopsy for management of which of the following patients?
- cervical biopsy = CIN 3 with endocervical glandular involvement
  - cervical biopsy = CIN 3, squamo-columnar junction (SCJ) cannot be seen on colposcopy
  - cervical biopsy = CIN 3, patient is 24 weeks pregnant
  - ECC = adenocarcinoma in situ, squamo-columnar junction (SCJ) is visible on colposcopy
- 47) There are no effective methods currently available in use for adequate screening for endometrial cancer. However, certain findings on Pap smears are suggestive of endometrial cancer. Which of the following is most predictive of an endometrial lesion?
- Cytologically atypical endometrial glandular cells
  - Elevated squamous maturation index
  - Atypical histiocytes
  - Bleeding (red blood cells)



- 48) Of the histologic subtypes of endometrial adenocarcinoma, which has the poorest prognosis?
- endometrioid
  - mucinous
  - adenocanthoma
  - clear cell
- 49) You find a locally invasive vaginal cancer in the lower third of your patient's vagina. Based on anatomical lymphatic drainage patterns, which of the following lymph nodes would be primarily involved?
- aortic
  - inguinal
  - hypogastric
  - internal iliac
- 50) On performing lymphadenectomy for surgical staging, at least 10 lymph nodes are required to qualify for adequate staging. Which of the following groups of lymph nodes is most important prognostically?
- external iliac
  - hypogastric
  - obturator
  - paraortic
- 51) What are the primary lymph nodes involved in the spread of cervical carcinoma?
- paracervical and obturator
  - sacral and inguinal
  - common iliac and aortic
  - perineal



Examinee \_\_\_\_\_

**Partograph Case Study # 2**

**Record all information on the partograph**

Mrs. B was admitted at 10:00 on September 4, 2006.  
Membranes intact  
Gravida 1, Para 0  
Medical Record number 1443  
The fetal head is 5/5 palpable above the symphysis pubis  
The cervix is 4cm dilated  
There are 2 contractions in 10 minutes, each lasting less than 20 seconds  
FH 140  
Membranes intact  
Blood pressure 100/70  
Temperature 36.2  
Pulse 80 per minute  
Urine output 400mL: negative protein & acetone

**What is your diagnosis?** \_\_\_\_\_

**What action will you take?** \_\_\_\_\_

10:30 FH 140, Contractions 2/10 each 15 sec, pulse 90  
11:00 FH 136, Contractions 2/10 each 15 sec, pulse 88, membranes intact  
11:30 FH 140, Contractions 2/10 each 20 sec, pulse 84  
12:00 FH 136, Contractions 2/10 each 15 sec, pulse 88, Temp 36.2  
The fetal head is 5/5 palpable above the symphysis pubis  
The cervix is 4cm dilated, membranes intact

**What is your diagnosis?** \_\_\_\_\_

**What action will you take?** \_\_\_\_\_

12:30 FH 136, Contractions 1/10 each 15 sec, pulse 90  
13:00 FH 140, Contractions 1/10 each 15 sec, pulse 88  
13:30 FH 130, Contractions 1/10 each 20 sec, pulse 88  
14:00 FH 140, Contractions 2/10 each 20 sec, pulse 90, temp 36.8, blood pressure 100/70  
The fetal head is 5/5 palpable above the symphysis pubis  
Urine output is 300 mL, negative protein & acetone

**What is your diagnosis?** \_\_\_\_\_

**What action will you take?** \_\_\_\_\_

The cervix is 4cm dilated, sutures apposed  
Labor augmentation with oxytocin 2.5 units in 500 mL IV fluid at 10 drops per minute (dpm) is started  
14:30 FH 140, Contractions 2/10 each 30 sec, pulse 88, infusion increased to 20 dpm  
15:00 FH 140, Contractions 3/10 each 30 sec, pulse 90, infusion increased to 30 dpm  
15:30 FH 140, Contractions 3/10 each 30 sec, pulse 88, infusion increased to 40 dpm  
16:00 FH 144, Contractions 3/10 each 30 sec, pulse 92, fetal head is 2/5 palpable above the symphysis pubis, cervix is 6cm dilated, sutures apposed, infusion increased to 50 dpm

16:30 FH 140, Contractions 3/10 each 45 sec, pulse 90

**What action will you take?** \_\_\_\_\_

17:00 FH 138, Pulse 92, Contractions 2/10 each 40 sec, maintain at 50 dpm

17:30 FH 140, Pulse 94, Contractions 3/10 each 45 sec, maintain at 50 dpm

18:00 FH 140, Pulse 96, Contractions 4/10 each 50 sec, maintain at 50 dpm

18:30 FH 144, Pulse 94, Contractions 4/10 each 50 sec, maintain at 50 dpm

19:00 FH 144, Pulse 90, Contractions 4/10 each 50 sec, fetal head is 0/5 palpable above the symphysis pubis, the cervix is fully dilated

19:30 FH 142, Pulse 100, Contractions 4/10 each 50 sec

20:00 FH 146, Pulse 110, Contractions 4/10 each 50 sec

20:10 Spontaneous delivery of a live male infant, Wt 2.654kg

**How long was the active phase of the first stage of labor?**

**How long was the second stage of labor?**

**Why was labor augmented?**

Examinee \_\_\_\_\_

**Shoulder Dystocia Case Study**

Mrs. A. is a 35 year old gravida 7, para 6. She was admitted to RBH in active labor at 10:00 pm. Labor has progressed well, as indicated on her partograph. It is now 4:00 am & the fetal head has just delivered & remains tightly applied to the vulva.

**What will you include in your initial assessment of Mrs. A & why?**

Immediate assessment of the situation reveals the following:

The chin retracts & depresses the perineum

Traction on the head fails to delivery the shoulder, which is caught behind the symphysis pubis.

**Based on these findings, what is Mrs. A.'s diagnosis & why?**

**Based on your diagnosis, what is your plan of care for Mrs. A & why?**

No further progress has been made

**Based on these findings, what is your continuing plan of care for Mrs. A & why?**



Examinee \_\_\_\_\_

### **Shock Case Study**

Mrs. A. is 20 years old. She gave birth to a full-term newborn 2 hours ago at home. Her birth attendant was a local traditional birth attendant, who has brought Mrs. A. to the health center because she has been bleeding heavily since childbirth. The duration of labor was 12 hours, the birth was normal & the placenta was delivered 20 minutes after the birth of the newborn.

**What will you include in your initial assessment of Mrs. A & why?**

**What particular aspects of Mrs. A.'s physical examination will help you make a diagnosis or identify her diagnosis & why?**

**What screening procedures / laboratory tests will you include in your assessment of Mrs. A & why?**

You have completed your rapid assessment of Mrs. A & your main findings include the following:

Pulse rate 108 beats/minute BP 80/60 RR 22 breaths/minute Temp 36.8C

She is pale & sweating

Uterus is soft & does not contract with fundal massage. She has heavy, bright red vaginal bleeding

The TBA says she thinks the placenta & membranes were complete

**Based on these findings, what is Mrs. A.'s diagnosis & why?**

**Based on your diagnosis, what is your plan of care for Mrs. A & why?**

Some placental tissue has been removed from Mrs. A's uterus. 15 minutes after initiation of treatment, however, she continues to have heavy vaginal bleeding. Her bedside clotting test is 5 minutes. Her pulse is 100 beats/minute & BP 80/60 mmHg.

**Based on these findings, what is your continuing plan of care for Mrs. A & why?**

**What are 2 examples of surgical treatment that may be performed?**