Reader’s Self-Assessment Quiz

1. According to the ADA Code of Ethics, a “dentist has a duty to treat people fairly.” Which of the following ethical principles is the above statement associated with?
   a. Justice
   b. Autonomy
   c. Veracity
   d. Nonmaleficence

2. Peripheral vascular resistance is more profound during:
   a. the first trimester
   b. labor
   c. the third trimester
   d. the second trimester

3. The increase in cardiac output during pregnancy:
   a. is caused by an increase in stroke volume in late pregnancy
   b. is caused by an increase in heart rate in early pregnancy
   c. counteracts the decreased oxygen capacity of maternal blood
   d. reaches its peak in the third trimester

4. The decrease in blood pressure is contributed by the action of:
   a. prostacyclin
   b. estradiol
   c. progesterone
   d. all of the above

5. Vascular remodeling in pregnancy is demonstrated by an increase in arterial compliance. A measure of increase in arterial compliance is provided by the aortic ______ index, a marker of aortic stiffness

6. Which of the following respiratory parameters remains unchanged in pregnancy?
   a. Total lung volume
   b. Inspiratory reserve volume
   c. Expiratory reserve volume
   d. Minute ventilation

7. The mild respiratory alkalosis of pregnancy is caused by:
   a. an increase in arterial carbon dioxide tension
   b. a decrease in arterial oxygen tension
   c. a fall in serum bicarbonate
   d. none of the above

8. A pregnant patient in the 34th week of gestation is found to be anemic. This condition is a result of:
   a. considerable drop in red blood cell volume
   b. decrease in plasma volume
   c. increased red blood cell turnover
   d. increase in plasma volume

9. Gestational thrombocytopenia develops from the effect of the following factors except for:
   a. reduced platelet activation
   b. hemodilution
   c. increased levels of thromboxane A2
   d. increased platelet aggregation
10 Pregnant women are at higher risk for thromboembolic event as a result of being in a hypercoagulable state. Which of the following coagulation factors is elevated in pregnancy?
   a Antithrombin III
   b Factor XII
   c Factor XIII
   d Factor IX

11 Hyperemesis gravidarum can cause the following conditions except for:
   a emotional stress
   b hyperthyroidism
   c hypothyroidism
   d vitamin B1, B6, and B12 deficiency

12 What is the percentage of pregnant women who experience pyrosis during the third trimester of pregnancy?
   a 10–25%
   b 40–85%
   c 20–30%
   d 5–15%

13 Which of the following is one of the earliest kidney functional changes that occur in pregnancy?
   a Increase in glomerular filtration rate
   b Increased urinary protein excretion
   c Increased excretion of amino acids
   d Increased excretion of glycose

14 The normal thyroid-stimulating hormone level during pregnancy is higher than the normal nonpregnancy level.
   a True
   b False

15 Pregnant women are at high risk for infections because they are immunosuppressed.
   a True
   b False

16 Vascular skin changes during pregnancy account for which of the following conditions?
   a Dermatographism
   b Chadwick's sign
   c Goodell's sign
   d All of the above

17 Which of the following is not a sign or symptom of supine hypotensive syndrome?
   a Pallor
   b Diaphoresis
   c Bradycardia
   d Nausea

18 From the respiratory point of view, when a pregnant patient is undergoing dental or medical treatment, the development of ______ needs to be avoided

19 The agent of choice for thromboprophylaxis in pregnancy is:
   a unfractionated heparin
   b coumadin
   c low molecular weight heparin
   d apixaban

20 A pregnant woman is susceptible to urinary tract infections because of the following conditions except for:
   a glycosuria
   b aminoaciduria
   c increased ureteral tone
   d asymptomatic bacteriuria

21 What percentage of pregnancies is complicated by gestational diabetes mellitus?
   a 15%
   b 7%
   c 25%
   d 10–20%

22 Pemphigoid gestationis affects only the skin and is an autoimmune subepidermal blistering disease associated with pregnancy
   a True
   b False
23 Which of the following statements is correct?
   a  Impetigo herpetiformis is a variant of HSV
   b  Oral cavity involvement is in the form of fissured tongue
   c  Both are correct
   d  Neither is correct

24 When a pregnant patient is sited in the dental chair, in addition to placing her in the position that prevents aortocaval compression and SHS, every effort should be made (e.g., with the use of cushions) to provide enough comfort, because close to _____% of patients experience frequent episodes of back pain

25 Pregnant women particularly during the first trimester develop an aversion to ______

26 Quantitative laboratory serum pregnancy tests detect:
   a  human chorionic gonadotropin (hCG) only
   b  hyperglycosylated (hCG-H) only
   c  hCG and hCG-H
   d  none of the above

27 Prenatal oral health counseling is very important in informing the pregnant woman on the risks that poor oral health poses for the mother and fetus. One of these risks is the vertical transmission of cariogenic Staphylococcus aureus from the mother to the infant with a significant risk for future caries experience and potentially low infant birth weight
   a  True
   b  False

28 Pregnancy gingivitis is considered the most common oral manifestation in pregnancy and reaches its peak:
   a  in the second month of gestation
   b  in the sixth month of gestation
   c  in the eight month of gestation
   d  at term

29 Which of the following is not part of the recommendations regarding the dental management of a patient in the first trimester of pregnancy?
   a  Educate the patient about maternal oral changes during pregnancy
   b  Emphasize strict oral hygiene instructions and thereby plaque control
   c  Scaling, polishing, and curettage may be performed if necessary
   d  Avoid routine radiographs. Use selectively and when needed

30 What measures are required if amalgam is to be used for dental restorations in pregnant women?
   i  Use of rubber dam
   ii  Scavenger system
   iii  Avoid overfilling
   iv  Polish restorations shortly after placement
   a  (i) and (ii) only
   b  (i), (ii), and (iii) only
   c  (i), (ii), and (iv) only
   d  (ii), (iii), and (iv) only

31 In composite restorations, the highest percentage of uncured monomer is present in the ______  ______  ______

32 Physiologic changes in pregnancy that may contribute to the development, severity, and complications of odontogenic infections include the following except for:
   a  the decrease in blood pressure
   b  the physiologic anemia of pregnancy
   c  the gastroesophageal reflux
   d  the increase in heart rate

33 Which is the most important sign or symptom that would dictate hospital referral of a pregnant patient with an odontogenic infection?
   a  Fever
   b  Dysphagia
   c  Trismus
   d  Airway compromise
34 Which of the following statements regarding the indications for removal of an epulis of pregnancy is not true?
   a) The epulis should be removed if it is traumatized by opposing teeth resulting in pain and bleeding
   b) When it interferes with normal speech and/or mastication
   c) It should always be removed when it develops during pregnancy
   d) When it bleeds spontaneously without prior trauma

35 Maternal physiologic changes that can influence the surgical and adjuvant treatment of malignancy in pregnancy include the following except for:
   a) hypercoagulability
   b) immunosuppression
   c) hypermetabolism
   d) decreased albumin levels

36 Which of the following statements relative to the expected increase in the incidence of oral cancer in pregnant women is not true?
   a) Young females start to smoke early in life
   b) An increased incidence of oral cancer is already seen in young female nonsmokers
   c) Women tend to delay childbearing to an older age
   d) All of the above statements are true

37 A pregnant woman in her 29th week of pregnancy presents to the dental office with partially avulsed anterior maxillary teeth secondary to domestic violence. The proper management of this patient requires:
   a) splinting of the partially avulsed teeth with composite resin
   b) splinting with brackets and orthodontic wire
   c) hospital referral
   d) referral to an oral surgery practice

38 Which of the following statements relative to the treatment of facial fractures in pregnancy is not true?
   a) Long-term maxillomandibular fixation (MMF) is always required to ascertain fracture stability and correct occlusion in pregnant as in nonpregnant women
   b) Fracture treatment could be temporized with closed reduction until post partum
   c) Rigid fixation of maxillary and mandibular fractures is advisable to avoid or minimize the period of maxillomandibular fixation (MMF)
   d) All of the above statements are true

39 Which of the following local anesthetics should be used with caution in a breastfeeding patient?
   a) Articaine
   b) Prilocaine
   c) Mepivacaine
   d) Bupivacaine

40 Which of the following analgesics should be used with caution during breastfeeding?
   a) Ibuprofen
   b) Codeine
   c) Aspirin
   d) Morphine

41 Metronidazole should be avoided during breastfeeding because:
   a) it can alter the oral flora of the newborn
   b) it gives maternal milk an unpleasant taste
   c) it can reach toxic blood levels in the newborn even in recommended doses
   d) all of the above

42 Which of the following corticosteroids is safe to be given to a breastfeeding mother?
   a) Betamethasone
   b) Prednisone
   c) Dexamethasone
   d) Hydrocortisone
43 Which of the following statements is true when performing BLS on an unconscious pregnant patient?
   a Chest compressions are performed with the patient in a 15–30° tilted position
   b Chest compressions are performed with the patient in supine position
   c Hands are placed slightly higher on the sternum
   d AED should not be used because it can affect the fetal heart

44 Which of the following conditions is less likely to cause cardiac arrest in pregnancy?
   a Amniotic fluid embolism
   b Eclampsia
   c Ectopic pregnancy
   d Anesthetic complications

45 Which of the following conditions listed below differentiates severe preeclampsia from eclampsia?
   a Hypertension
   b Visual changes
   c Chest pain
   d Seizures

46 Which of the conditions that cause abdominal pain in pregnancy is considered a life-threatening emergency?
   a Placenta previa
   b Placental abruption
   c Ectopic pregnancy
   d Spontaneous abortion

47 If a spontaneous abortion occurs while a pregnant patient is under treatment in the dental office, all blood-soaked towels, blood clots, and tissues should be disposed immediately as a potential biohazard.
   a True
   b False

48 The conditions listed below can cause bleeding in late pregnancy except for:
   a anembryonic pregnancy
   b vasa previa
   c placental abruption
   d placenta previa

49 What are the most important actions during an ob-gyn emergency situation occurring in the dental office?
   a Activate EMS for immediate transport
   b Monitor vital signs, perform BLS if needed
   c Notify the patient’s obstetrician-gynecologist
   d All of the above

50 The latent phase of the first stage of labor is characterized by the following except for:
   a progressive coordination of irregular contractions
   b bloody show before or during this stage
   c Braxton Hicks contractions
   d amniotic sac may break before or during this stage

51 During spontaneous normal vaginal delivery and after the head has fully emerged, which part of the infant should be delivered next?
   a Posterior shoulder
   b Anterior shoulder
   c Right upper extremity
   d Left upper extremity

52 Which of the following protective measures render dental radiography absolutely safe for the pregnant patients?
   a Rectangular collimated beams
   b Use of high-speed films
   c Lead apron and thyroid collar
   d All of the above

53 Which of the following statements about radiation exposure from CBCT is true?
   a Exposure is the same with cephalometric X-rays
   b Exposure is approximately the same as that of full mouth series
Exposure is equal to that of a medical-grade CT scan

A drug has a FDA PR category C rating. This means that:
- animal studies demonstrate no fetal risk but human studies are inadequate to determine risk
- human studies demonstrate no fetal risk but animal studies are inadequate to determine risk
- human studies demonstrate fetal toxicity but animal studies are inadequate. The benefit of use does not exceed the risk
- animal studies demonstrate fetal toxicity but human studies are inadequate. The benefit of use may exceed the risk

Which of the following local anesthetics is a less favorable choice for use during pregnancy?
- Prilocaine
- Mepivacaine
- Lidocaine
- None of the above

Which is considered the ideal local anesthetic that can be used safely in pregnancy?
- 2% Lidocaine with 1:100000 epinephrine
- 0.5% Bupivacaine with 1:200000 epinephrine
- 3% Mepivacaine
- 4% Prilocaine +/- vasoconstrictor

The antibiotic with the most robust safety record in pregnancy is:
- Cephalexin
- Amoxicillin
- Clindamycin
- Vancomycin

The estolate form of erythromycin is contraindicated in pregnancy because:
- Toxic fetal levels can be reached with even the recommended dose
- It is associated with infant low birth weight
- It causes enamel hypoplasia
- It is associated with maternal reversible hepatotoxicity

Which of the following analgesics is not considered safe for use in early pregnancy?
- Oral acetaminophen
- Intravenous acetaminophen
- Ibuprofen
- None of the above

Which is considered to be a safe combination of acetaminophen with an opioid analgesic?
- Acetaminophen with codeine
- Acetaminophen with hydrocodone
- Acetaminophen with oxycodone
- All of the above

The known consequences of smoking during pregnancy include the following conditions except for:
- Low birth weight
- Sudden infant death syndrome
- Fluctuating dental asymmetry
- Neonatal abstinence syndrome

Fetal alcohol syndrome is associated with the following oral conditions except for:
- Cleft lip and palate
- Delayed shedding of primary teeth
- Tongue thrust
- Prolonged and excessive drooling

One of the most common oral conditions resulting from the use of illicit drugs in pregnant and nonpregnant women is xerostomia.
- True
- False

Which of the oral sedatives listed below is absolutely contraindicated in pregnancy?
- Diazepam
- Triazolam
- Clordiazepoxide
- All of the above
65 The \( \text{N}_2\text{O} \) concentrations in dental procedure rooms should be kept at the recommended exposure limit (approximately 55 ppm or 75 milligrams per cubic meter).
   a True
   b False

66 Which of the following statements about maternal hypercapnia and hypocapnia during procedural IV sedation is \emph{not} true?
   a It is tolerated by the fetus
   b It causes fetal respiratory acidosis
   c It results in uterine artery vasoconstriction
   d It depresses the myocardium

67 What is the FDA PR rating of the following procedural IV sedation drugs?
   - Fentanyl ______
   - Propofol ______
   - Ketamine ______
   - Midazolam ______

68 Neonatal abstinence syndrome does not only affect infants exposed to illicit substances, but also infants exposed to the treatments for opioid addictions.
   a True
   b False

69 Which of the following statements regarding the use of general anesthesia in the pregnant patient is \emph{not} true?
   a Teratogenic agents should be avoided
   b Premature labor should be prevented
   c Fetal monitoring is very rarely required
   d Nonreassuring fetal status should be prevented

70 Which is the only antibiotic so far known whose concentrations are higher in the umbilical cord than maternal plasma?
   a Cefmenoxime
   b Ceftizoxime
   c Ampicillin
   d Gentamicin

71 MRI is contraindicated in pregnancy because it can cause teratogenicity, fetal tissue heating, and fetal acoustic damage.
   a True
   b False

\textbf{Correct Answers and Comments}

1 a
2 d
3 c
4 d (Through vasodilation)
5 Aortic \textit{augmentation} index
6 b
7 c (Through increased bicarbonate excretion from the kidneys)
8 d
9 a (Platelet activation is accelerated potentially at the placental circulation)
10 d
11 c
12 b
13 a
14 b (Is lower)
15 (The current notion is that the maternal immune system is modulated but not suppressed)
16 d
17 c (Tachycardia)*

*Editor’s comment: In some literature references, bradycardia is mentioned among the signs and symptoms of SHS. The authors of those articles make reference to the study of Holmes (1960) who studied 500 women pregnant 36 or more weeks for the development of SHS in the supine position. 45 women developed a rise (50% or more) in diastolic pressure in this position but only 3 responded with bradycardia. 31 women with a drop in systolic blood pressure ranging from 30% to 49.9% developed tachycardia whereas 10 women with a drop in systolic pressure >50% after an initial rise (tachycardia) showed a precipitous fall
in pulse rate apparently because of fainting as it is reported in the study. Therefore, tachycardia is the predominant cardiovascular response in SHS and not bradycardia.


18 hypoxia
19 c
20 c (The urinary tone is decreased leading in urine stasis which also predisposes to UTIs in pregnancy)
21 7%
22 b (The oral cavity is also affected)
23 d (Impetigo herpetiformis is not a variant of HSV, and the oral cavity involvement is in the form of geographic tongue)
24 49%
25 smells
26 c
27 b (*Streptococcus mutans* and not *Staph. aureus*)
28 c
29 c (Second and third trimesters)
30 c (The amalgam should be well condensed until overfilled and then the mercury-rich layer carved off)
31 oxygen inhibition layer
32 d (The progressive increase in heart rate which peaks in the third trimester may help to maintain end-organ perfusion until later stages of septic shock)
33 d
34 c
35 b (The current notion is that the maternal immune system is modulated but not suppressed)
36 d
37 c (Force could have also been applied to the abdomen and hospital referral is justified because complications limited to the pregnancy itself, such as an abortion, can occur after even relatively minor trauma to the abdomen from falls, domestic abuse, and low-speed motor vehicle accidents)
38 a
39 a
40 c (Association of aspirin use with Reye syndrome and potential for bleeding secondary to impaired platelet function. However, maternal ingestion of anti-platelet doses (e.g., 75–100mg daily) of aspirin during breastfeeding would not be expected to be problematical in healthy term infants)
41 b
42 b
43 b (New AHA recommendations)
44 c
45 d
46 c
47 b (Blood-soaked towels, blood clots, and tissues should be sent to the hospital with the patient so that spontaneous abortion can be confirmed)
48 a (Can cause vaginal bleeding in early pregnancy)
49 d
50 c (False labor)
51 b
52 d
53 b
54 d
55 b
56 a
57 b
58 d (Can cause cholestatic hepatitis)
59 b
60 c (Oxycodone is safer in pregnancy)
61 d
62 a
63 a (Most if not all illicit drugs cause xerostomia)
64 b (Animal studies have shown evidence of retarded or impaired skeletal formation, and impaired viability and weight gain. There are no controlled data in human pregnancy)
65 b (The recommended exposure is approximately 25 ppm or 45 milligrams per cubic meter)
66 a
67 Fentanyl C, Propofol B, Ketamine N (not classified), Midazolam C
68 a
69 c
70 b
71 b