SECTION 1: SYSTEMATIC ASSESSMENT OF THE PREGNANT WOMAN

Please decide if the following statements are true or false: mark your answer on the answer sheet provided.

1. A systematic assessment of the pregnant woman includes Leopold’s Maneuvers.
2. The choice of monitoring methods depends on the number of registered nurses and patients.
3. Auscultation of fetal heart tones is desired prior to application of the fetal monitor.
4. When a fetoscope is used, document the fetal heart rate, accelerations, and decelerations.
5. The initial assessment may include fundal height to rule out intrauterine growth restriction or fetal macrosomia.
6. A cervical examination can confirm the fetal presenting part.
7. At 26 weeks of gestation, the tocotransducer should be placed above the umbilicus.
8. It is important to consider the impact of maternal and fetal physiology on the FHR.

SECTION 2: THE PAPER

Please decide if the following statements are true or false: mark your answer on the answer sheet provided.

1. International scale paper speed is 1 cm/minute.
2. On USA scale paper, each 20 seconds equals 1 cm in length.
3. If the paper is loaded correctly, the fetal heart rate channel is on the right.
4. Parity has been defined as the number of live babies delivered after 20 weeks of gestation.
5. It is acceptable to use a fetal monitor even if the printer test strip lines are misaligned with the paper grid.
6. The maternal heart rate can print on the fetal monitor paper.
7. If twin B delivers first, the baby becomes twin A.
8. Fetal heart rates can double with second-generation monitors.
9. The maternal pain response may cause accelerations of the maternal heart rate.
10. The maternal heart rate may decelerate.

SECTION 3: EXTERNAL AND INTERNAL FETAL MONITORING

Please decide if the following statements are true or false: mark your answer on the answer sheet provided.

1. Always keep the ultrasound transducer on the abdomen until the spiral electrode is in and working.
2. Coupling gel helps transmit fetal heart sounds when it is applied to the ultrasound transducer.
3. When “logic” is on it removes abnormal fetal heart rate lines due to premature atrial contractions and premature ventricular contractions.
4. Zeroing removes the effect of hydrostatic pressure on the uterine activity printout.
5. Offset is ± 2 mm Hg in the uterine pressure due to the cable and pressure transducer design.
6. Autocorrelation creates a more reliable external tracing than first-generation peak detection.
7. A spiral electrode and/or ultrasound transducer can transmit the maternal heart rate.
8. The ultrasound transducer transmits the electrical energy of the heartbeat.
9. Confirmation of fetal life can best be accomplished by using a hand-held Doppler if the ultrasound transducer failed to detect the fetal heart rate.
10. Maternal tachycardia occurs when there is chorioamnionitis.
SECTION 4: UTERINE CONTRACTIONS
Please decide if the following statements are true or false: mark your answer on the answer sheet provided.

1. Fear decreases uterine activity.
2. A resting tone of 8 to 12 mm Hg is normal.
3. The interval is the time from the beginning of one contraction to the beginning of the next contraction.
4. Intensity, or active pressure, is synonymous with strength or quality of contractions.
5. Calculation of Montevideo Units should be used to identify hypocontractility.
6. Abnormal labor may be related to a fetal presenting part that is not well applied to the cervix.
7. A tocotransducer can provide fairly accurate information on contraction frequency and duration.
8. Contraction detection with a tocotransducer in a preterm gestation is as accurate as in a term gestation.
9. An intrauterine pressure catheter is needed to evaluate peak intrauterine pressure.
10. An occiput posterior position is related to uterine contraction coupling.

SECTION 5: THE BASELINE
Please decide if the following statements are true or false: mark your answer on the answer sheet provided.

1. A systematic review of the fetal heart rate includes the baseline, accelerations, and decelerations.
2. The baseline has cycles.
3. A baseline is determined only after a review of 10 minutes of the tracing.
4. The baseline is influenced by neural, nutritional, hormonal and pharmacologic factors.
5. Fetal heart rate baseline changes can occur abruptly or over minutes.
6. Preterm infants have a normal heart rate range between 100 and 160 beats per minute.
7. Variability is a baseline characteristic.
8. A rising or falling baseline may indicate hypoxia.
9. The baseline of an asphyxiated fetus has variability.
10. A wandering baseline requires actions to improve fetal oxygenation and expedite delivery.

SECTION 6: LONG-TERM VARIABILITY
Please decide if the following statements are true or false: mark your answer on the answer sheet provided.

1. Long-term variability has two components: sine waves and amplitude in beats per minutes.
2. “Absent long-term variability” is documented if there are less than 1½ cycles per minute.
4. A wandering baseline is the same as long-term variability.
5. A pathologic sinusoidal pattern has long-term variability.
6. To use long-term variability categories in documentation you must first identify the bandwidth of the baseline.
7. Absent, minimal, and marked long-term variability require further assessments and possible actions to improve fetal oxygenation.
8. Fetal sleep and awake cycles are accompanied by changes in long-term variability.
9. “Present long-term variability” is clear terminology that enhances visualization of the tracing if the tracing is lost.
10. Long-term variability is influenced by sympathetic and vagus nerves.
SECTION 7: SHORT-TERM VARIABILITY

Please decide if the following statements are true or false: mark your answer on the answer sheet provided.

1. Beat-to-beat variability is measured in beats per minute.
2. The presence of a reactive acceleration strongly suggests short-term variability is present.
3. A sawtooth pattern is a sign of central nervous system compromise.
4. When STV is exaggerated, the fetus may be hypoxic.
5. The absence of STV is always synonymous with metabolic acidosis.
6. STV can be 100% accurately measured when a spiral electrode is on the fetus.
7. STV is a deceleration characteristic.
8. Even if the fetus has complete heart block, short-term variability will be present.
9. Supplemental oxygen should reach the fetus by 9 or fewer minutes.
10. When short-term variability is present, it is never necessary to intervene.

SECTION 8: ACCELERATIONS

Please decide if the following statements are true or false: mark your answer on the answer sheet provided.

1. Nonstress tests are reactive if they have two “10 x 15” accelerations in a 20 minute period.
2. It is not an acceleration unless it is 15 beats above baseline and lasts 15 seconds at its base.
3. Acceleration height for a nonstress test is usually measured from the bottom of the baseline.
4. Accelerations are related to fetal acid-base status.
5. Reactive accelerations must be sustained at the top for 15 or more seconds.
6. By 33 weeks of gestation, 90% of fetuses have reactive accelerations.
7. If one acceleration lasts 2 minutes, you can classify the tracing as reactive.
8. If two “10 x 15” accelerations are present in 20 minutes and the fetus is 26 weeks of gestation, the NST is not appropriate for gestational age.
9. More than half of fetuses less than 27 weeks of gestation have “15 x 15” accelerations.
10. “Reactive for gestational age” is acceptable language to document the NST result of a preterm fetus.

SECTION 9: EARLY DECELERATIONS

Please decide if the following statements are true or false: mark your answer on the answer sheet provided.

1. Early decelerations occur during the antepartal period.
2. Early decelerations often occur when the cervix is dilated 1-3 cm.
3. Early decelerations are associated with cephalopelvic disproportion.
4. Caput can occur before rupture of the membranes.
5. It is important to document the depth and duration of early decelerations.
6. If the fetal head is not compressed but the decelerations meet all the criteria of early decelerations, the next most likely cause of the decelerations is cord compression.
7. Early decelerations may be the result of pressure on the posterior fontanel.
8. Early decelerations are a precursor of possible brain trauma.
9. Early decelerations only occur when there is caput and molding.
SECTION 10: LATE DECELERATIONS

Please decide if the following statements are true or false: mark your answer on the answer sheet provided.

1. Late decelerations all have a gradual onset and offset.
2. All late decelerations begin at or after the peak of the contraction.
3. Late decelerations are often similar in shape.
4. If short-term variability is present, they are not late decelerations.
5. If accelerations are present, they are not late decelerations.
6. It takes 15 minutes for supplemental oxygen to reach the fetus.
7. Hypotension may precede late decelerations.
8. Late decelerations are indicative of fetal hypoxia.
9. Spontaneous decelerations reflect myocardial failure.

SECTION 11: VARIABLE DECELERATIONS

Please decide if the following statements are true or false: mark your answer on the answer sheet provided.

1. Variable decelerations are uniform in shape and size.
2. Variable decelerations are only a periodic pattern, they are never nonperiodic.
3. Expect very low Apgar scores when there are variable decelerations, absent long-term variability and absent short-term variability.
4. An atypical feature of a variable deceleration is a shoulder.
5. An overshoot is an increase in the fetal heart rate following a variable deceleration. The increase is 15 bpm above the baseline which lasts 15 seconds.
6. A low fetal pH is associated with repetitive variable decelerations with overshoots.
7. A biphasic variable deceleration is related to an umbilical cord less than 50 cm in length.
8. Utilizing descriptors of mild, moderate, and severe adequately documents variable decelerations.
9. A variable deceleration nadir less than 80 bpm has no clinical significance.
10. Variable decelerations lasting 60 or more seconds and falling to less than 70 bpm are associated with fetal acidemia.

SECTION 12: PROLONGED DECELERATIONS

Please decide if the following statements are true or false: mark your answer on the answer sheet provided.

1. A prolonged deceleration lasts 2 to 15 minutes.
2. Fetal tachycardia following fetal bradycardia is a reassuring sign.
3. A prolonged deceleration may be due to fetal head compression.
4. Maternal hypotension may precede a prolonged deceleration.
5. Actions during a prolonged deceleration include fetal scalp stimulation.
6. Following a prolonged deceleration, the return to a baseline within the normal range in and of itself is reassuring.
7. Supplemental oxygen is not useful when a prolonged deceleration occurs.
8. The presence of baseline long-term variability in and of itself following a prolonged deceleration confirms fetal well-being.
9. Two or more prolonged decelerations represent a nonreassuring fetal heart rate pattern.
SECTION 14: NICHD DEFINITIONS

Please decide if the following statements are true or false: mark your answer on the answer sheet provided.

1. The NICHD panel met in 1997 to propose recognition criteria for fetal monitoring concepts.
2. To determine the baseline a minimum of 2 consecutive minutes are needed.
3. Variability is the same as long-term variability defined as 2 or more cycles per minute.
4. Accelerations according to the NICHD panel should peak in less than 30 seconds.
5. The difference between early and late decelerations is their nadir in relation to the contraction peak.
6. Recurrent decelerations are defined as 2 or more in an hour.
7. An intrauterine infection is associated with moderate variable decelerations and prolonged decelerations.
8. The average peak-to-nadir lag time of early decelerations is 3.5 seconds.
9. Cerebral palsy is related to an acute intrauterine infection and fetal tachycardia.
10. Using the NICHD nomenclature, nurses, midwives and physicians are most likely going to agree on the baseline.
# ESSENTIALS OF FETAL MONITORING HOME STUDY UNIT ANSWER SHEET

**DIRECTIONS:** Please fill in the circle corresponding to your answer.  Example: ●●

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**FOR OFFICE USE ONLY**

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**STATE:** __________  **ZIP CODE:** __________

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- RN  
- CNM  
- Nurse Practitioner  
- MD/DO  
- JD  
- Other __________________________

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**SELF-STUDY UNIT EVALUATION:**

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<td>2. My ability to use the information will be:</td>
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<td>4. The description and/or explanation of techniques and procedures were:</td>
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<td>5. The questions at the end of chapters were:</td>
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<td>6. My expectations of this unit were met:</td>
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<td>7. Overall, I would rate this unit as:</td>
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**MODULE OBJECTIVES –**

After reading Essentials of Fetal Monitoring, I feel that I will be able to:

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<td>1. Identify maternal and fetal assessment techniques:</td>
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<td>2. Recognize the most common fetal heart rate patterns:</td>
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<td>3. Identify the names of each part of the FHR pattern:</td>
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<td>4. Implement interventions and actions to improve fetal oxygenation:</td>
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<td>5. Evaluate changes in maternal and/or fetal status as a result of my actions:</td>
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<td>6. Identify ineffective actions that delay timely interventions when there is a nonreassuring FHR pattern:</td>
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<td>7. Communicate and document appropriate information to the provider and patient:</td>
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I purchased my copy of the Essentials of Fetal Monitoring (3rd edition) from:

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- [ ] A seminar - Seminar year and location: ________________________________
- [ ] on Ebay
- [ ] other ________________________________

**ADDITIONAL COMMENTS:**

________________________________________________________

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