**Subject N 2.**

 **Physiological pregnancy.**

Literature for the lesson:

1. DC Dutta's Textbook of Obstetrics 8 th Edition

Ch. 3, 4, 5

MSQs

1. What is the most sensitive phase of development in the period organogenesis:

1. The first 2 weeks.

2. The first 3 to 6 weeks.

3. The first 8 weeks.

4. The first 9 weeks.

2. When is the period of organogenesis and placentation?

1. The 2nd month of intrauterine fetal development.

2. The 3rd4th month intrauterine fetal development.

3. Specify the sequence in which the elements of the membranes eggs are included in the pathological process in the period of organogenesis and placentation:

1. First chorion, significantly later embryo.

2. First embryo, significantly later chorion.

4. Please specify which medication is classified as a universal teratogen:

1. All these products.

2. Streptomycin.

3. Monomitsin.

4. Thalidomide.

5. Dietilestilbestrol.

5. Which of the following system's of the fetal body forms last:

1. The endocrine.

2. The respiratory organs.

 3. The outer genital organs.

6. Please specify what time of pregnancy the embryo is most sensitive to the impact of radiation exposure:

1. During the first 2 weeks of pregnancy.

 2. During the first 2 to 7 weeks of pregnancy.

3. During the first 8 weeks of pregnancy.

7. In what period does hypoxia of the mother affects the development of a fertilized embryo:

1. In preimplantation period.

2. In the period of organogenesis.

8. Embryonic period continues from the moment of fertilization up to:

1. 2 weeks

2. 3 to 6 weeks

3. 78 weeks

4. 911 weeks

5. 12 weeks

9. The normal volume of amniotic fluid is:

1. 200-500 ml.

2. 1,500 ml.

3. 1,500 ml.

4. 2500 ml.

5. 10000-12000 ml.

10. Which does not refer to the transverse diameter of the pelvic outlet?

1. Biischial diameter

2. Bispinous diameter

3. Bituberous diameter

4. Intertuberous diameter.

11. What is the other name of the anteroposterior diameter of the pelvic inlet:

1. Diagonal conjugate

2. True conjugate

3. conjugate Vera

4. obstetric conjugate

12. The true conjugate can be calculated by subtracting which from the diagonal conjugate?

1. 2.5- 3 cm

2. 3.5 - 4 cm

3. 3- 4 cm

4. 1.5 -2 cm

13. The most important muscle of the pelvic floor is the:

1. levatorani muscle

2. ischiocavernous

3. bulbocavernous

4. Pubococcygeous

14. Which pelvic shape has the poorest prognosis for vaginal delivery?

1. platypelloid

2. anthropoid

3. android

4. gynecoid

15. The two pubic bones meet anteriorly at the:

1. symphysis pubis

2. coccyx

3. sacrococcygeal

4. sacroilliac joint

16. The average length of the umbilical cord in human is:

1. 35 cm

2. 55 cm

3. 65 cm

4. 45 cm

17. Urinary excretion of HCG is maximal between which days of gestation?

1. 50-60

2. 40-50

3. 60-70

4. 30-40

18. The cardinal function of deciduas is:

1. Immune resonse

2. Production of hormones

3. Maintenance of pregnancy

4. None of the above

19. The diagonal conjugate is 11 cm. The obstetric conjugate is:

1.7 cm

2. 9 cm

3.11 cm

4.13 cm

5. 15 cm

20. The narrowest diameter of the true pelvis is:

1.the anteriorposterior diameter of the inlet

2.the transverse diameter of the inlet

3.the anteriorposterior diameter of the midpelvis

4. the transverse diameter of the midpelvis

5.none of the above

21. An ultrasound dating examination is most accurate during which trimester?

1. first

2.second

3.third

22. All of the following is indications for an obstetrical ultrasound EXCEPT:

1.sizedates discrepancy

2.vaginal bleeding

3. gender identification

4.history of previous congenital anomaly

23. Fetal cardiac activity can be identified with ultrasound as early as:

1. 34 weeks

2. 56 weeks

3. 78 weeks

4. 910 weeks

24. A biophysical profile includes all of the following EXCEPT:

1.fetal movement

2.amniotic fluid measurement

3.fetal breathing

4. fetal size

25. Ultrasound in labor and delivery is useful to determine:

1.fetal gender

2.fetal lung maturity

3.fetal position

4.fetal foot size

26. Doppler ultrasound is used to measure:

1.placental resistance

2.blood flow velocity

3.fetal hearing

4.fetal tone

27. Fetal weight is estimated using all of the following EXCEPT:

1. biparietal diameter

2. femur

3. abdominal circumference

4. chest circumference

28. The major phospholipid component of surfactant at term is:

1. sphingomyelin

2. lecithin

3. phosphatidyl glycerol

4. trypsin

5. serine

29. Which of the following statements is false regarding the risk of a genetic amniocentesis at 16-20 weeks using standard procedures?

1. The risk includes an increased risk of infection.

2. The risk includes an increase in premature rupture of membranes.

3. The risk includes an increased incidence of in utero fetal demise.

4. The risk of a fetal loss secondary to the procedure, is approximately 10fold greater than the risk of a spontaneous loss at that time.

5. The risk of spontaneous loss is at least 10fold greater than the risk of induced loss.

30. Physiological changes in pituitary function during pregnancy include all of the following EXCEPT:

1. decreased gonadotropin levels

2. decreased growth hormone stimulation

3. increased ACTH levels

4. decreased TSH levels

5. increased prolactin levels

31. Which of the following is the most important utero/placental/fetal response to diminished uterine blood flow:

1. a decrease in the tone of uterine arteries resulting in improved blood flow

2. enhanced fetal cardiac contractility (Frank-Starling mechanism)

3. fetal bradycardia

4. fetal heart rate accelerations

32. Fetal weight is estimated by ultrasound is usually accurate to within:

1. 5%-10%

2. 10%-15%

3. 15%-20%

4. 20%-25%

33. In the pregnant woman, insulin:

1. has less biologic activity

2. freely passes the placenta

3. has normal secretory patterns in response to glucose stimuli

4. does not alter placental metabolism

5. has a reduced metabolic clearance rate

34. Ultrasound at 6-11 weeks' gestation is considered confirmatory of gestational dates if agreement with menstrual dates is within:

1. 1 day

2. 3days

3. 1 week

4. 2 weeks

5. 3 weeks

35. Physiological changes seen in pregnancy:

1. Heart rate increases by 30 % in the second trimester

2. RBC folate concentration increases

3. Increased renal plasma flow

4. Blood pressure drops in the first trimester

5. Increased blood urea levels

36. Maternal changes in normal pregnancy include:

1. an increase in fibrinogen level in blood

2. an increase in the stroke volume during the second trimester

3. an increase in blood supply to the liver

4. an increase in total peripheral resistance

5. an increase in red cell mass

37. Elevated levels of AFP in maternal blood at 16 weeks' gestation may suggest all of the following fetal problems EXCEPT:

1. twins

2. neural tube defects

3. fetal growth retardation

4. polyhydramnios

38. Regarding renal changes in pregnancy:

1. Increase in size of the kidney

2. Increase in glomerular filtration rate

3. Increase in incidence of hydronephrosis

4. Increase in incidence of urinary tract infection

5. All of the above

39. Regarding reproductive system changes in pregnancy:

1. Uterine smooth muscles undergo hypertrophy

2. Significant increase in uterine blood flow

3. Prolactin induces milk production

4. Cervix secretes more alkaline secretions

5. All of the above

40. Maternal changes during pregnancy:

1. Increase minute ventilation

2. Increase in kidney size

3. Increase in corticosteroids

4. Decreased peripheral resistance

5. All of the above

41. Regarding respiratory changes in pregnancy:

1. Total pulmonary resistance is reduced

2. PaO2 increases

3. Functional residual capacity decreases

4. O2 consumption increases

5. All of the above

42. Regarding gastro intestinal changes in pregnancy:

1. Increase in gastric motility

2. Intestinal motility is unchanged

3. Hepatic blood flow is increased

4. Telengiactasia is a feature

5. Increased incidence of gastro oesophageal reflux disease

43. Regarding endocrine changes in pregnancy:

1. Hyperplasia of the thyroid gland occurs during pregnancy

2. Rise in free T4 during first trimester

3. Insulin activity decreases

4. Thyroxin-binding globulin increases

44. Abnormal features in CTG:

1. baseline fetal heart rate 90 beats per minute

2. baseline variability of 4 beats per minute

3. presence of late decelerations

4.presence of variable decelerations

5. All of the above

45. Which of the following regarding abnormal CTG:

1. An acceleration lasting for 15 seconds

2. Baseline heart rate of 150 beats / mins at term

3. Baseline variability of 15 beats / mins

4. Reactive trace would have one acceleration in 20 minutes

46. Regarding CTG:

1. Baseline rate is low in preterm fetus

2. Presence of type 1 deceleration at 2nd stage indicates immediate delivery

3. Reduces the overall incidence of caesarean section

4. Reduction in baseline variability indicate fetal hypoxia

47. Ultrasound examination during pregnancy:

1. Contra indicated in first trimester

2. Best performed at 28th weeks of pregnancy to exclude fetal anomalies

3. Used to confirm meconium in amniotic fluid

4. Useful to locate the placenta

5. Causes increase risk of developing leukaemia in children

48. During normal pregnancy:

1. Blood flow to liver is increased by 30%

2. Blood pressure rises in third trimester

3. Estradiol is the principal circulating estrogen

4. Hydroureter is a always pathological

5. The erythrocyte sedimentation rate increases

49. Physiological changes in pregnancy include:

1. Increase in stroke volume by 5%

2. Rise in the haematocrit

3. Increase in plasma folate concentration

4. Increased loudness of both heart sounds (S1 and S2)

5. Modestly increased ACTH levels

50. Amnioscopy allows to evaluate:

1. the amount of amniotic fluid;

2. staining of amniotic fluid;

3. the presence of vernix caseosa flakes ;

4. all of the above;

5. none of the above.

Clinical cases:

1. Pregnant 28 years old, term of pregancy is 34 weeks, counted the episodes of fetal movements from 9 a.m. to 3 p.m. During this time, the fetus made 10 episodes of movement. Doctor's conclusion regarding the condition of the fetus.
2. Re-pregnant 26 years, term of pregancy is 37 weeks. When calculating fetal movements, she noted a sharp increase in their frequency: if previously always the tenth movement took place at 14-16 hours, then the last two days - at 10-11 hours. From time to time there are cramp-like pains in the lower abdomen. Seeked medical help. On auscultation, the fetal heart rate is 110 per minute. The cardiotocographic study was performed. In 60 minutes, 5 late decelerations were recorded against the background of bradycardia (100 beats per minute). Decelerations occurred in response to periodic increases in uterine tone. What should the doctor do?
3. A pregnant woman came to the scheduled appointment at the antenatal clinic with a diagnosis of Pregnancy 30 weeks.

When conducting an external obstetric examination, it was found that the height of the fundus of the uterus above the bosom corresponds to 30 weeks of pregnancy, the longitudinal axis of the fetus is parallel to the longitudinal axis of the uterus, the head of the fetus is above the pelvis inlet, the back is to the right anteriorly.

Formulate the diagnosis.

1. The determination of the external dimensions of the pelvis of the pregnant woman was carried out. Distantia spinarum is 26 cm, distantia cristarum - 28 cm, distantia trochanterica - 30 cm, external conjugate - 19 cm.Conjugata diagonalis is measured - 12 cm.Calculate the size of the true conjugate.
2. A 32-year-old woman was admitted to the hospital. Pelvic dimensions: Distantia spinarum -25 cm, distantia cristarum -28 cm, distantia trochanterica - 31 cm external conjugate - 20 cm. Abdominal circumference 100 cm, the height of the fundus of the uterus - 36 cm.

 Estimate the size of the pelvis and determine the estimated fetal weight.

1. A woman was admitted to the hospital at 39 weeks and 3 days of pregnancy. To assess readiness for labor, a vaginal examination was performed. It was found that the cervix centers, is shortened to 1 cm, soft, the cervical canal freely passes 2 transverse fingers. Evaluate the condition of the cervix and the readiness of the woman's body for labor.
2. In the antenatal clinic, when conducting an external obstetric examination at 32 weeks of gestation, it was found that fundus of the uterus is located 3 cm above the navel, the presenting part is above pelvis inlet is not detected, large parts of the fetus are palpated in the lateral parts of the uterus. The fetal head is on the left, the buttocks are on the right.

 Diagnosis.

1. Pregnant 32 years old, 39 weeks of pregnancy. The sizes of the pelvis: Distantia spinarum 25 cm, distantia cristarum -28 cm, distantia trochanterica - 31 cm, external conjugate - 20 cm. Abdominal circumference 100 cm, the height of the uterine fundus - 32 cm. The lie of the fetus is longitudinal. The head is pressed to the pelvis inlet. The tones are clear, rhythmic, 134 beats per minute, on the right below the navel.

Vaginal examination. The vagina is free. The cervix is ​​shortened to 0.5 cm, soft, centered, the cervical canal passes two fingers. The amniotic membrane is intact. The head is pressed pelvis inlet. The promontory is not reached. Diagnosis. Evaluate the condition of the cervix and the readiness of the woman's body for labor. Estimate the size of the pelvis and determine the estimated fetal weight.

1. A pregnant woman at 39 weeks of pregnancy. During the cardiotocogram for 20 minutes, the basal heart rate is 132 beats / min, there are no accelerations, against the background of an increase in the tone of the uterus, decelerations are recorded.

 Assess the condition of the fetus.