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**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

**UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR**

FIRST YEAR SECOND TRIMESTER EXAMINATIONS

**FOR THE DEGREE
OF
BACHELOR OF SCIENCE IN NURSING**

COURSE CODE: NRM 121

COURSE TITLE: PRECONCEPTION AND PREGNANCY

DATE: Tuesday 9/4/2024

TIME: 11:30am-2:30 pm

INSTRUCTIONS TO CANDIDATES

1. Question Enter your examination number and course code in the space provided in the answer sheet
2. All questions are compulsory.
3. For Part One MCQ, write the correct answer in the answer sheet provided
4. Each MCQ is 1 mark
5. For Part Two, Short answer questions, answer each question following each other
6. For part three, Long Answer questions, answer each subsections following each other

MMUST observes ZERO tolerance to examination cheating

Section 1: MCQ 20 marks

1. Preconception health care is:
 - a) Care given during pregnancy
 - b) Care given during pregnancy and intrapartum
 - c) Care given before pregnancy
 - d) Care given before and during pregnancy
2. The following are goals of preconception health care EXCEPT:
 - a) to provide screening for risks
 - b) health promotion
 - c) offer prenatal health for better pregnancy outcome
 - d) and interventions to address identified risk
3. In Kenya the concept of preconception health care can be traced back from 1996 as part of the components of reproductive health programme.
 - a) 1998
 - b) 1990
 - c) 2000
 - d) 1996
4. For someone who weighs 60 kg and is 1.65 m tall. Their body mass index is:
 - a) 22.06kg/m
 - b) 21.06kg/m
 - c) 20.06.kg/m
 - d) 19.06kg/m
5. All women are recommended to increase their daily folate and folic acid intake by an additional ----- µg prior to conception and during the first 12 weeks of pregnancy.
 - a) 500
 - b) 400
 - c) 300
 - d) 200
6. Which of the following defects are prevented by intake of folic acid?
 - a) Cardiovascular defects
 - b) Genital defects
 - c) Neural tube defects.
 - d) Respiratory defects.
7. A high dietary intake of vitamin A produces an increased frequency of defects among the babies born to women who had consumed high levels of vitamin A before the 7th week of pregnancy. Which defects are mostly associated with high levels of vitamin A?
 - a) Craniofacial and heart defects
 - b) Limb defects.
 - c) Genitourinary defects.

- d) Respiratory defects
- 7. High levels of mercury are found in fish such as shark, swordfish and marlin are associated with-----defects
 - a) Digestive system
 - b) muskuloskeletal
 - c) neurological
 - d) cardiac
- 8. In diabetes the teratogenic effects to the fetus are caused by ----- occurring during organogenesis.
 - a) hyperglycemia
 - b) Hypoglycemia.
 - c) Glycosylated heamoglobin
 - d) Hyperpyrexia
- 9. Smoking can affect women's sexual and reproductive health in the following ways EXPECT
 - a) Ectopic pregnancy.
 - b) Low birth weight
 - c) hyperthyroidism
 - d) Preterm labour.
- 10. Consuming large quantities of alcohol can result in :
 - a) increased appetite
 - b) Increased fertility
 - c) Fetal alcohol syndrome
 - d) Correction of menstrual disorders
- 11.The role of genetic counseling involve the following except:
 - a) support the people involved so that they can reach their own fully informed decisions.
 - b) Diagnose the problem and its implications in relation to prognosis and possible treatment
 - c) Determine the mode of inheritance and the risk of developing or transmitting the disorder
 - d) Discuss available and non available choices or options
- 12. Chromosome aberrations include :
 - a) Achondroplasia
 - b) Down syndrome
 - c) Cleft lip and palate
 - d) ompalocele

13. In Mendelian inheritance, an autosomal dominant disorder manifests:

- a) when the condition is present in homozygous state
- b) when chromosomal abnormalities are present
- c) when the condition is present in the heterozygous state
- d) when we have the

14. The role of follicle stimulating hormone is:

- a) responsible for ovulation
- b) Controls the maturity and growth of the follicles
- c) Maintains pregnancy
- d) Responsible for menstruation.

15. Which of the following is NOT a common cause of female infertility?

- a) Polycystic ovary syndrome (PCOS)
- b) Endometriosis
- c) Early menarche
- d) Blocked fallopian tubes

16. The hormone primarily responsible for ovulation in females;

- a) Estrogen
- b) Progesterone
- c) Follicle-stimulating hormone (FSH)
- d) Luteinizing hormone (LH)

17. In vitro fertilization (IVF) involves which of the following steps?

- a) Fertilization of the egg and sperm in the fallopian tube
- b) Implantation of the fertilized egg into the uterus
- c) Introduction of sperm directly into the uterus
- d) Extraction of eggs from the ovaries, fertilization outside the body, and implantation of the embryo into the uterus

18. The term used to describe the inability to achieve a pregnancy after one year of regular, unprotected intercourse:

- a) Infertility
- b) Subfertility
- c) Sterility
- d) Hypofertility

19. Which of the following techniques involves the direct injection of a single sperm into an egg to facilitate fertilization?

- a) Intrauterine insemination (IUI)
- b) Gamete intrafallopian transfer (GIFT)
- c) Intracytoplasmic sperm injection (ICSI)
- d) Zygote intrafallopian transfer (ZIFT)

20. Which sexually transmitted infection (STI) can lead to infertility if left untreated in both men and women?

- a) Gonorrhea
- b) Syphilis
- c) Chlamydia
- d) Human papillomavirus (HPV)

21. The most common cause of male infertility:

- a) Varicocele
- b) Erectile dysfunction
- c) Low sperm count
- d) Hormonal imbalance

22. The reproductive technology involving the transfer of a donor egg into the uterus of the intended mother or a gestational carrier is termed

- a) Intrauterine insemination (IUI)
- b) In vitro fertilization (IVF)
- c) Egg donation
- d) Surrogacy

23. The chronic illness associated with an increased risk of miscarriage, preterm birth, and fetal growth restriction is:

- a) Hypertension
- b) Diabetes mellitus
- c) Rheumatoid arthritis
- d) Asthma

24. Pregnant women with uncontrolled _____ are at higher risk of birth defects in their babies.

- a) Epilepsy
- b) Hypothyroidism
- c) Depression
- d) Crohn's disease

25. Which chronic condition can lead to preeclampsia, a serious complication characterized by high blood pressure and organ damage?

- a) Lupus
- b) Multiple sclerosis
- c) Celiac disease
- d) Chronic obstructive pulmonary disease (COPD)

26. Women with _____ may require adjustments in medication during pregnancy to ensure optimal control and minimize risks to both mother and baby.

- a) HIV/AIDS
- b) Parkinson's disease
- c) Migraine
- d) Ulcerative colitis

27. Chronic kidney disease during pregnancy increases the risk of:
- a) Gestational diabetes
 - b) Placental abruption
 - c) Oligohydramnios
 - d) Hyperemesis gravidarum
28. Which chronic illness is associated with an increased risk of stillbirth and neonatal complications such as respiratory distress syndrome (RDS)?
- a) Sickle cell disease
 - b) Ankylosing spondylitis
 - c) Polycystic kidney disease
 - d) Hyperthyroidism
29. The maternal condition that increases the risk of intrauterine growth restriction (IUGR), preterm birth, and low birth weight in infants.
- a) Crohn's disease
 - b) Graves' disease
 - c) Sarcoidosis
 - d) Systemic lupus erythematosus (SLE)
30. Which chronic illness requires careful management during pregnancy to prevent complications such as congenital heart defects and fetal growth restriction?
- a) Thalassemia
 - b) Myasthenia gravis
 - c) Crohn's disease
 - d) Congenital adrenal hyperplasia
31. Pregnant women with this condition may be at higher risk of postpartum depression and complications during labor and delivery.
- a) Bipolar disorder
 - b) Osteoporosis
 - c) Chronic obstructive pulmonary disease (COPD)
 - d) Anemia of chronic disease
32. Which of the following is not true about ovulation?
- a) Ovulation is stimulated by a sudden surge in follicle stimulating hormone which matures the oocyte and weakens the wall of the follicle.
 - b) Stringy clear mucus appears in the cervix, ready to accept the sperm from intercourse.
 - c) During ovulation some women experience varying degrees of abdominal pain known as mittelschmerz, which can last several hours.
 - d) There may be some light bleeding caused by the hormonal changes taking place.
 - e)
33. In the proliferative phase of the menstrual cycle:

- a) There is the formation of a new layer of endometrium in the uterus.
 - b) The endometrium is shed down to the basal layer along with blood from the capillaries and the unfertilized oocyte.
 - c) The functional layer of the endometrium thickens to approximately 3.5 mm .
 - d) The blood supply to the area is increased and the glands produce nutritive secretions such as glycogen.
34. The enzyme which disperses the corona radiata (the outermost layer of the oocyte) cells is:
- a) acrosin
 - b) zona lysin
 - c) Hyaluronidase
 - d) Trypsin like enzyme
35. The derivatives of the ectoderm layer of the embryo include:
- a) Epithelial lining of the nose
 - b) nails
 - c) bones
 - d) muscles
36. In anatomical variation of the placenta where an opaque ring is seen on the fetal surface of the placenta is called
- a) Bi partite placenta
 - b) Circumvallete placenta
 - c) Battledore
 - d) Succenturiate lobe
37. The true sign of pregnancy include:
- a) Morning sickness
 - b) pica
 - c) Fetal heart sound
 - d) HCG in urine
38. Which hormone is primarily responsible for the relaxation of smooth muscles, including those in the uterus, during pregnancy?
- a) Estrogen
 - b) Progesterone
 - c) Human chorionic gonadotropin (hCG)
 - d) Relaxin
39. The increase in maternal blood volume during pregnancy is primarily due to:
- a) Increased production of red blood cells

- b) Decreased renal function
 - c) Constriction of blood vessels
 - d) Expansion of plasma volume
40. What is the term for the swelling of the ankles and feet commonly experienced by pregnant women?
- a) Hyperemesis gravidarum.
 - b) Chloasma
 - c) Gestational diabetes
 - d) Edema
41. Which of the following is a physiological change that occurs in the respiratory system during pregnancy?
- a) Increased lung capacity
 - b) Decreased oxygen consumption
 - c) Decreased respiratory rate
 - d) Increased tidal volume
42. Pregnancy-induced nausea and vomiting, commonly known as morning sickness, are believed to be associated with:
- a) Elevated levels of estrogen
 - b) Decreased levels of progesterone
 - c) Low levels of human chorionic gonadotropin (hCG)
 - d) Excessive weight gain
43. What is the term for the darkening of the skin around the nipples and on the face that occurs in many pregnant women?
- a) Linea nigra
 - b) Chloasma
 - c) Melasma
 - d) Striae gravidarum
44. Pregnant women often experience an increase in which hormone, which stimulates the production of milk in preparation for breastfeeding?
- a) Prolactin

- b) Oxytocin
- c) Thyroxine
- d) Cortisol

45. Which of the following is a common psychological adaptation to pregnancy?

- a) Decreased anxiety
- b) Increased libido
- c) Nesting instinct
- d) Decreased emotional sensitivity

46. What is the term for the sensation of fetal movements felt by the mother, typically starting between 16 to 25 weeks of gestation?

- a) Quickening
- b) Braxton Hicks contractions
- c) Placental abruption
- d) Eclampsia

47. Pregnant women often experience increased urinary frequency due to:

- a) Enlargement of the bladder
- b) Decreased blood flow to the kidneys
- c) Pressure on the bladder from the growing uterus
- d) Increased production of antidiuretic hormone (ADH)

48. During which stage of pregnancy does implantation typically occur?

- a) First trimester
- b) Second trimester
- c) Third trimester
- d) Preconception

49. What is the medical term for the developing baby during the first eight weeks of pregnancy?

- a) Embryo

- b) Fetus
- c) Zygote
- d) Blastocyst

50. The inner cell mass of the blastocyst will develop into:

- a) The placenta
- b) The umbilical cord
- c) The amniotic sac
- d) The fetus

51. At approximately how many weeks gestation does the fetal heartbeat typically become detectable via ultrasound?

- a) 4 weeks
- b) 6 weeks
- c) 8 weeks
- d) 10 weeks

52. During which trimester does the fetus begin to develop identifiable features such as fingers, toes, and facial features?

- a) First trimester
- b) Second trimester
- c) Third trimester
- d) Last trimester

53. The neural tube, which eventually forms the brain and spinal cord, typically closes by the end of which trimester?

- a) First trimester
- b) Second trimester
- c) Third trimester
- d) Mid trimester

54. Which hormone is primarily responsible for maintaining the uterine lining during early pregnancy?

- a) Estrogen
- b) Progesterone
- c) Human chorionic gonadotropin (hCG)
- d) Prolactin

55. What is the term for the fluid-filled sac that surrounds and protects the developing fetus?

- a) Amniotic sac
- b) Chorionic sac
- c) Placenta
- d) Umbilical sac

56. Which structure allows for the exchange of nutrients and waste products between the mother and the fetus?

- a) Placenta
- b) Amniotic sac
- c) Umbilical cord
- d) Chorionic villi

57. At what point in pregnancy is the fetus considered viable, meaning it could survive outside the womb with medical assistance?

- a) 20 weeks gestation
- b) 24 weeks gestation
- c) 28 weeks gestation
- d) 32 weeks gestation

58. Which of the following topics is typically covered in sexual and reproductive health education?

- a) Methods of contraception
- b) Gender equality and human rights
- c) Techniques for enhancing sexual performance
- d) The benefits of early childbearing

59. Sexual and reproductive health education aims to:

- a) Shame individuals for their sexual behavior

- b) Exclude LGBTQ+ individuals from the conversation
- c) Foster open communication about sexuality and relationships
- d) Promote risky sexual behavior among adolescents

60. In genetic counseling, what is the role of the counselor?

- a) To make decisions for the individual or family
- b) To provide unbiased information and support
- c) To prescribe medications for genetic conditions
- d) To perform genetic testing

Section II: SAQs 20 marks

1. State two psycho social and psychological aspects of infertility (2marks)
2. state four traditional practices and taboo that affect the health of women during pregnancy and childbirth .(4marks)
3. Explain three factors that hinder provision of preconception health care. (6 marks)
4. Explain the effects of the following on pregnancy a)underweight b)obesity c)diabetes d)epilepsy (8marks)

Section III: Long Essay Questions (40 marks)

1. A couple comes in a preconception health clinic for advise before conception :Explain any 10 general risk factors that may need to be addressed before the couple plans for a pregnancy(20marks)