

**UNIVERSITY OF ESWATINI
FACULTY OF HEALTH SCIENCES
MAIN EXAMINATION QUESTION PAPER; DECEMBER 2018**

TITLE OF PAPER: ADVANCED EMBRYOLOGY AND NEONATAL SCIENCE

COURSE CODE: MWF 603

DURATION: Three (3) Hours

TOTAL MARKS: 100

- INSTRUCTIONS:**
- 1. THE PAPER CONSISTS OF FOUR (4) QUESTIONS**
 - 2. ANSWER ALL QUESTIONS**
 - 3. ALL QUESTIONS CARRY EQUAL MARKS**
 - 4. READ THE QUESTIONS CAREFULLY**
 - 5. FIGURES IN BRACKETS INDICATE MARKS ALLOCATED TO A QUESTION OR PART OF A QUESTION**
 - 6. START EACH QUESTION ON A FRESH PAGE**

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**MWF 603: ADVANCED EMBROLOGY AND NEONATAL SCIENCE,
QUESTION PAPER, DECEMBER; 2018**

QUESTION 1

Choose the most appropriate response. Each correct response carries one (1) mark. **Total 25 marks.**

- 1.1 The embryonic period when teratogens have the greatest effect on organs is the first
- A. 8 weeks
 - B. 15 -60 days
 - C. 15-56 days
 - D. 15-21 days
- 1.2 Which of the following can be used to estimate the risk of recurrence of a genetic disorder?
- A. Mode of inheritance
 - B. Dominant disorder
 - C. Translocation chromosomes
 - D. Child's sex.
- 1.3 Which of the following concept(s) can assist with interpreting of genetic risk?
- A. Pregnancy as an independent event.
 - B. A child born with a disorder with multifactorial causes
 - C. Risk increases with each subsequent child born with a multifactorial disorder
 - D. Disorders do not recur in subsequent pregnancies.

1.4 Which of the following is true about teratogens during the first two weeks of embryonic development? Teratogens

- A. Cause congenital malformations
- B. Cause intrauterine retardation
- C. Have severe effects which contribute to abortions
- D. Severely affects development of the brain during this period.

1.5 Which of the following are patterns of genetic transmission?

- A. Unilateral inheritance
- B. Genetic inheritance linked to the sex of the baby
- C. Multifactorial inheritance
- D. Autosomal gene.

1.6 Which of the following are some of the reasons for referring couples for genetic counselling?

- A. Preconception and prenatal information
- B. To familiarize them with risk of genetic disorders
- C. Ruling out teratogens
- D. To share knowledge with clinicians.

1.7 The knowledge of embryology helps midwives to

- A. Understand the period of susceptibility of the embryo to environmental and teratogens.
- B. Appreciate anatomy, physiology and developmental milestones
- C. Understand physiological implications
- D. Know the possible interventions to address during labour.

1.8 What does differentiation of cells mean?

- A. the cells move from one medium to another
- B. the cells influence growth and development of muscles
- C. Cells move from a multipotent stem cell type to become a more specialised cell with a particular task
- D. Cells develop into different cells.

1.9 Which of the following best describes embryology?

- A. Embryology begins with fertilisation and ends by the eighth week
- B. It deals with the preconception period
- C. This pregnancy lasts about 266 + 3 days or 38 weeks
- D. Obstetricians point to 6 to 8 weeks.

1.10 The knowledge of embryology helps midwives to

- A. Understand the period of susceptibility of the embryo to environmental and teratogens.
- B. Appreciate anatomy, physiology and developmental milestones
- C. Understand physiological implications
- D. The possible interventions to address during labour.

1.11 Signalling refers to

- A. A multipotent stem which differentiate
- B. A sign which a cell sends to another cell to start developing
- C. The implications which results to growth and development of the baby
- D. The effect of one group of cells as it influences growth of another group of cells but it must pass through a receptor.

1.12 Which of the following is among the common causes of respiratory distress in neonates?

- A. Meconium aspiration
- B. Postdates
- C. Congenital malformations of the respiratory system
- D. Transient tachypnoea of the newborn from delayed absorption of fluid in the lungs from delivery.

1.13 Which of the following is true about congenital viral infections?

- A. Disease is usually non progressive
- B. Infection is usually acquired at the actual time of birth (during the second stage of labour)
- C. Usually neonates are asymptomatic at birth
- D. Anencephaly is common.

1.14 The following tests are usually used to detect chromosomal problems so as to prepare parents for possible congenital abnormalities.

- A. Chorionic villus sampling
- B. Ultra sound scan
- C. CTG
- D. CT Scan.

- 1.15 Which of the following is true about cold stress in the neonate?
- A. Cold stress increases the need for oxygen and depletes glucose stores.
 - B. The infant reacts by generating more heat
 - C. Cold stress increases the need for carbon dioxide excretion
 - D. The infant reacts by reducing the respiratory rate.
- 1.16 Which of the following may contribute to lack or weak rooting reflex in the neonate?
- A. Poor development of the palate and lack of parental guidance
 - B. Poor examination skill of the midwife
 - C. Age of the neonate
 - D. Neurologic defect.
- 1.17 Which of the following may connote asymmetrical response of the moro reflex in the neonate?
- A. Injury to the neck
 - B. Injury to the brachial plexus
 - C. Injury to the wrist
 - D. Injury to the arm.
- 1.18 Which of the following may contribute to hypertonia (posture) on examination of the newborn?
- A. Increased oxygen supply to the fetus while in utero
 - B. Maternal drug dependence
 - C. Peripheral nerve disorder
 - D. Postmaturity.

- 1.19 During examination of the newborn the midwife felt a weak femoral pulse. Which of the following can be the possible cause?
- A. Hip dysplasia
 - B. Thrombus
 - C. Thromboembolism
 - D. Aortic Aneurysm.
- 1.20 Mrs X delivered her baby 6-8 hours ago. The baby's temperature is not yet stabilized. Which of the following can be the possible cause?
- A. The mother received Paracetamol two (2) hours prior to giving birth
 - B. The mother received Magnesium Sulphate in labour
 - C. The mother had severe pre-eclampsia
 - D. The mother had an eclamptic fit prior to delivery.
- 1.21 Lolo has just given birth two (2) minutes ago. On examination, the neonatal breaths are loud and clear. The respiratory rate is > 60 breaths per minute. Which of the following may be the contributory factor?
- A. Maternal narcosis from analgesia
 - B. Congenital diaphragmatic hernia
 - C. Birth trauma
 - D. Rapid warming of the infant.

1.22 Lulu has delivered her baby 10 minutes ago. On examination crackles were heard. Which of the following is the possible cause?

- A. Coarctation of the aorta
- B. Fluid in the lungs
- C. Failure of the lungs to initiate gaseous exchange
- D. Immature lungs due to prematurity.

1.23 Which of the following diagnoses should be the highest priority of the midwife who is caring for a preterm baby?

- A. Ineffective thermoregulation related to lack of subcutaneous fat
- B. Anticipatory grieving due to fear of loss of the baby
- C. Imbalanced nutrition related to immature digestive system
- D. Risk of injury related to lack of adipose tissue.

1.24 The midwife is caring for a preterm neonate who is at risk of intraventricular haemorrhage (IVH). Which daily assessment is critical for this baby?

- A. Intake and output
- B. Moro reflex
- C. Blood pressure
- D. Occipital frontal circumference.

1.25 The midwife is assigned to a baby receiving phototherapy. Which assessment warrants further investigation by the midwife?

- A. Loose green stools
- B. Yellow tint of skin
- C. Temperature of 35 °C
- D. Fine red rash on trunk.

QUESTION 2

The first two hours of life are critical for the survival of baby including bonding.

2.1 Discuss the care that is rendered to the neonate during the first two (2) hours following birth. (10marks).

2.2 Outline the possible deviations which can be noted in the newborn under the following systems (headings):

2.2.1 External structure (3 marks).

2.2.2 Chest(3 marks).

2.2.3 The genitourinary system-(3 marks).

2.2.4 Neurologic(3 marks).

2.2.5 Abdomen (3 marks).

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QUESTION 3

Mrs X delivered a baby at home yesterday and now reports to the hospital and highlight that her baby has not been feeding well since birth. A diagnosis of subarachnoid haemorrhage is made.

3.1 Explain the possible cause (3marks).

3.2 Describe the clinical manifestation of subarachnoid haemorrhage in a term infant(10 marks).

3.3 Describe the possible care management of a neonate presenting with subarachnoid haemorrhage(12 marks).

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QUESTION 4

4.1 Explain the factors that place neonates at increased risk of respiratory distress syndrome (5marks).

4.2 Describe the clinical manifestations of respiratory distress syndrome immediately after birth or within six hours of birth including possible radiologic findings (10marks).

4.3 Outline the basic management of respiratory distress syndrome (10 marks).

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