



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN MEDICAL BIOCHEMISTRY

SBC 580: GENETICS AND DEVELOPMENT ASPECTS OF DISEASE

DATE: WEDNESDAY, 28TH MARCH 2012

TIME: 9.00A.M – 12.00P.M

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INSTRUCTIONS: Section A: Answer ALL questions; Each 5 marks

1. Define aneuploidy and give two examples of pathological disorder associated with it.
2. With an illustration, explain how mutation causes genetic disorders.
3. State the clinical significance of genetic screening tests.
4. State 5 maternal biochemical changes during pregnancy
5. Define aminoacidopathies and give 4 examples.
6. Define oligohydramnios and polyhydramnios. Give 3 clinical problem areas that have benefited from amniocentesis.
7. Outline the causes and clinical symptoms of ectopic pregnancy

8. State three characteristics of ideal tumor markers. Give their roles in the management of cancers.

Section B: Answer 3 questions;10 marks each

1. a) Outline 3 basic mechanisms of intermediary metabolic disorders

b) Briefly describe the biochemical basis for the resulting diseases.

2. Discuss the etiology, signs and management of the following genetic disorders: (i) Downer's syndrome (ii) Turner's syndrome

3. With a diagram describe prenatal developmental changes of hemoglobin (Hb).

4. With a diagram, describe the etiologies of phenylketonuria.