M. SC. (MEDICAL BIOTECHNOLOGY) SEM-II (CHOICE BASED CREDIT SYSTEM) : SUMMER - 2018

SUBJECT : MEDICAL GENETICS

Day : **Tuesday**
Date : **10/04/2018**

S-2018-1166

Time : **10.00 AM TO 01.00 PM**
Max. Marks : 60.

N.B.:

1) Q. No. 1 and Q. No. 5 are **COMPULSORY.** Out of the remaining attempt any **TWO** questions from each section.
2) Both the sections should be written in **SEPARATE** answer books.
3) Figures to the **RIGHT** indicate full marks.
4) Draw neat labeled diagrams **WHEREVER** necessary.

SECTION-I

Q.1 Attempt the following in brief (Any **Five**) **(10)**

a) Define Mendelian trait.
b) What is maternal inheritance?
c) Define Pleiotrophy.
d) What is Rh factor?
e) Define codominance giving example.
f) What is aneuploidy?

Q.2 Attempt the following: **(10)**

a) Explain law of independent assortment with an example.
b) Explain multiple alleles with an example.

Q.3 Attempt the following: **(10)**

a) Write a note on Human ABO blood group system.
b) Explain the role of Y chromosome in sex determination.

Q.4 Write short notes on any **TWO** of the following: **(10)**

a) Kleinfelter's syndrome
b) Spontaneous abortions
c) Sickel cell anemia
d) X-linked mental retardation.

SECTION-II

Q.5 Attempt any **TWO** of the following: **(10)**

a) Explain the cause and symptoms of Turner's syndrome.
b) Illustrate numerical chromosomal abnormalities.
c) Define genetic counseling. What is its significance?

Q.6 Attempt the following: **(10)**

a) Explain how FISH is used to detect chromosomal abnormality.
b) Write an account on inherited cancer syndromes.

Q.7 Attempt the following: **(10)**

a) Explain diagnostic methods for detection of fetal genetic abnormalities.
b) Explain genetic defect underlying cystic fibrosis. What are its symptoms?

Q.8 Explain various types of mutations with suitable examples. **(10)**

OR

Describe various inborn errors of amino acid metabolism.

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