

**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) Klinefelter's syndrome
 - b) Spontaneous abortions
 - c) Sickle 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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