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

SUBJECT : VACCINES, ANTIBIOTICS & THERAPEUTICS

Day : **Wednesday** Time : **02.00 PM TO 05.00 PM**

Date : **04/04/2018** Max. Marks : 60

S-2018-1171

N.B.:

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

SECTION – I

Q.1 Explain in detail: **[10]**

a) What are aminoglycoside antibiotics? Explain their mechanism of action on protein synthesis with suitable examples.

b) Manufacturing procedure and in-process control of traditional bacterial vaccines.

Q.2 Elaborate: **[10]**

a) Cloning of antibiotic biosynthesis genes by complementation.

b) Toxoids.

c) Vector vaccines.

d) Antifungal drugs.

Q.3 **a)** Explain in detail different mechanisms of multiple drug resistance in bacteria with suitable examples. **[05]**

b) Production of β-lactam antibiotic. **[05]**

Q.4 Write short notes on the following: **[10]**

a) MIC

b) Recombinant peptide vaccines

c) Edible vaccines

d) DNA vaccines

SECTION – II

Q.5 Explain in detail: **[10]**

a) Production of recombinant proteins using **i)** *E.coli* **ii)** Yeast and fungi.

b) Immunological approaches to detect contaminants in pharmaceutical products.

Q.6 Write short notes on the following: **[10]**

a) Interferons

b) Streptokinase

c) Human Growth Hormone

d) Sources of pyrogens

Q.7 Explain in detail: **[10]**

a) Different methods of sterility testing of pharmaceutical products.

b) Haematopoietic growth factors.

Q.8 Elaborate: **[10]**

a) GMP and GLP in pharmaceutical industry.

b) Production of phytochemicals.

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