

BSC. PART - II EXAMINATION - 2009

BOTANY HONOURS PAPER IV

Answer five questions, selecting two from each Group in which Q.NO. 1 is compulsory.

I. (A) Answer the following questions

- (a) Who discovered bacteria?
- (b) Name one smut disease of barley.
- (c) Name one bacteria which spoils the milk.
- (d) What was the field of activity of Dr. K. C Mehta?
- (e) Name one fungus helping in the fermentation process.

(B) Select the correct answer of the following :

- (a) Which one of the following is a fungicide?
(i) DDT (ii) Bordeaux mixture (iii) 2, 4, D (iv) DCMU
- (b) Penicillin was discovered by :
(i) A. Fleming (ii) Blakeslee (iii) Dodge (iv) Millardet
- (c) Which one the following diseases is caused by *Claviceps Purpurea*?
(i) Ergot disease of rye (ii) Corn smut
(iii) Late blight of Potato (iv) Little leaf of brinjal
- (d) Plasmids are :
(i) Viruses (ii) New type of micro-organisms
(iii) Genetic elements of bacteria
(iv) Extra chromosomal genetic elements of bacteria
- (e) A free living bacterium capable of fixing atmospheric nitrogen is :
(i) *Staphylococcus* (ii) *Streptococcus* (iii) *Azotobacter* (iv) *Rhizobium*
- (f) Botulism is caused by :
(i) *Clostridium tetani* (ii) *Clostridium botulinum*
(iii) *Mycobacterium tuberculosis* (iv) *Vibrio Cholerae*
- (g) In gram + ve and gram - ve bacteria there is difference in :
(i) Cell wall (ii) Cytoplasm (iii) Nucleus (iv) Cell membrane
- (h) *Mycoplasma* differ from viruses in being sensitive to ;
(i) Sugars (ii) Tetracycline (iii) Proteins (iv) Amino acids
- (i) 'Germ Theory of disease' was given by:
(i) Louis Pasteur (ii) Lister (iii) Robert Koch (iv) Stanley
- (j) *Colletotrichum falcatum* causes:
(i) Red rot sugarcane (ii) Early blight of potato
(iii) Late blight of potato (iv) All of the above

GROUP - A

- 2. Give a brief account of history of microbiology.
- 3. Describe the structure of TMV. How does it differ from bacteriophage?
- 4. Give an account of industrial uses of microbes with reference to food processing and milk products.
- 5. Give an account of ultra structure of the bacterial cell.

GROUP - B

- 6. Name the causal organism of red rot of sugarcane. Write about the symptoms and measures to control this disease.
- 7. Name the pathogen of black rust of wheat. Describe the symptoms and methods for controlling this disease.
- 8. Give an account of chemical and biological management of plant disease control.
- 9. Write short notes on any two of the following : (a) Citrus canker
(b) Transmission and spread of pathogens (c) Tobacco mosaic disease