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Total Number of Pages :2

B.TECH. DEGREE EXAMINATION-Nov-Dec.2018

End Semester Examination-III Semester

BBTPC3010- Basics of Biology

(Regulations 2017)(Biotechnology Branch)

Time : 3 Hours

Maximum : 100 Marks

Question Code:191712

Answer ALL Questions

PART-A (10 X 2=20 Marks)

- 1.(a) Cell theory was proposed by ----- [CO1] [PO1]
i.Beadle and Tatum ii.Robert Hooke iii. Schleiden and Schwann iv. Leenuwenhoeck
- (b) Prokaryotic Genetic system has ----- [CO1] [PO1]
i. DNA but no Histone ii. DNA andHistone iii.No DNA no Histone
- (c) Which cell organell is known as the suicidal bag of cell? [CO1] [PO1]
i.Lysosome ii. Golgi iii. Mitochondria iv. Ribosome
- (d) In which phase of meiosis synapsis occurs? [CO2][PO1]
i. pachytene ii.prophase iii. Zygotene iv. Diplotene
- (e) Which inhibitor may lead to cancer? [CO2][PO1]
i. p36 II p37 iii. p53 iv. p54
- (f) Macromolecules are taken from cell surface by a process is called ----- [CO2][PO1]
i. Exocytosis ii. endocytosis iii. Secretory path way iv. Excretory pathway
- (g) Mendelism is proposed by which scientist ----- [CO4][PO1]
i .Watson and Crick ii.Thomson iii. G.J Mendel iv.Singer
- (h) Who coined the term crossing over ----- [CO4][PO2]
i. .H Morgan ii. Mendel iii. Janseens iv. Porter
- (i) Which process is not involved in modern synthetic theory? [CO4][PO2]
i. Isolation ii. Mutation iii Heredity iv Generation
- (j) Pangenesis hypothesis was proposed by ----- [CO4][PO1]
i. Lamarck ii. Thomas iii. T.H Morgan iv. Darwin

PART-B (10 X 2=20 Marks)

2. (a) What is prokaryotic and eu karyoyic cell? [CO1][PO1]
- (b) What is the function of ribosome? How many types of ribosome are there? [CO1][PO1]
- (c) Why Mitochondria known as power house of cell? [CO1][PO1]
- (d) What are the phase of cell cycle? [CO2][PO1]
- (e) What is intercellular communication? [CO2][PO1]
- (f) What are the stages of mitosis? [CO2][PO1]
- (g) Write down the uses of Chromosomal Mapping? [CO3][PO2]
- (h) What is Mutation? [CO3][PO2]
- (i) Describe about Dihybrid cross? [CO4][PO1]
- (j) What is Population? [CO4][PO1]



PART-C (4 X 15=60 Marks)

3. (a) (i) Draw a clean diagram of a plant cell and describe about it? [7][CO1][PO1]
(ii) Briefly Describe about the Molecular organization of chromosome? [8][CO1][PO1]
(or)
(b) (i). Write down the structure and function of Cytoskeleton? [7][CO1][PO1]
(ii) Write down the structure and function of Nucleus? [8][CO1][PO1]
4. (a) (i). A Narrate about the membrane transport mechanism? [7][CO2][PO1]
(ii) Write down about signaling pathway? [8][CO2][PO1]
(or)
(b) (i) Write down about protein shorting and targeting mechanism? [7][CO2][PO1]
(ii) What is passive transport? Describe with an example? [8][CO2][PO1]
5. (a) (i) What is Evolution? Discuss about the diversification of Life? [7][CO3][PO1]
(ii) Narrate about Cytoplasmic inheritance? [8][CO3][PO1]
(or)
(b) (i) write an essay on Chromosomal aberration? [7][CO3][PO1]
(ii) What is Mendelism? Briefly describe about it? [8][CO3][PO1]
6. (a) (i) What is breeding? Briefly discuss about breed in plant? [7][CO4][PO1]
(ii) Briefly discuss about breed in Animal? [8][CO4][PO1]
(or)
(b) (i)What is Natural selection? Write down about the types of selection? [5][CO4] [PO1]
(ii) Write down about developmental genetics with reference to *Arabidopsis* and *Drosophila*? [5+5][CO4][PO1]