A-T-I-C-T-
2015-16

30/9/15

VCD / / BIOCHEMISTRY- II- F.Y.B.S.c-SEM II - 75 MARKS - 2 1/2 HRS 25

Note: 1. Figures to right indicate marks.
2. All questions are compulsory.
3. Draw appropriately labeled diagrams wherever necessary.

Q I) A. Explain the following (any Four) [8]

i. Chromatin fiber.
ii. Kinetochore
iii. Equational division
iv. G0 phase of cell cycle.
v. During meosis in which sub-stage can observed?
vi. Sat chromosome.
vii. Sister chromatid
viii. Synaptonemal complex

B. Explain the following terms: (any Two) [6]

i. Write short note on nucleolus?
ii. Write down the characteristics of G1- phase of cell cycle?
iii. How dose meosis cell division help in evolution?
iv. State difference between metaphase I and metaphase II of meosis cell division.

C. Write Short note on: (any One) [6]

i. Meosis I ii. Nuclear membrane and nucleolus .

Q II) .A. Explain the following terms : (Any Four) [8]

i. Juxtramedullary nephron vii. Glycosidic enzyme.
ii. Endopeptidase viii. Distal convoluted tubule
iii. How does rennin help in protein digestion?
iv. State the unique nature of glomerular capillary.
v. What is glomerulus filtration co-efficient?
vi. Which type of cell present in descending limb of squamous epithelium?

B. Explain the following: (Any Three) [6]

i. Describe the structure of Glomerular membrane.
ii. Describe the digestion of lipid in stomach.
iii. Note on Na+ dependendent glucose transporter.
iv. Briefly describe water reabsorption during urine formation

C. Describe in brief :(Any One) [6]

i. Absorption of protein. ii. Reabsorption and secretion in proximal tubule.

Q III] A. Answer the following questions: (Any Four) [8]

i. Name the two groups present in dyes.
ii. Name the enzyme utilized in PCR derived from from T.aquaticus.
iii. Give two examples of simple stains.
iv. Name any 2 of microorganisms which belong to Heterotrophs.
v. What is the difference between bacteria and a pathogenic bacteria?
vi. Peritrichous bacteria?
vii. What are autotrophic microbes?
viii. Draw the microbial growth curve in a closed system.

B. Explain the following terma in brief: (Any Two) [6]

i. Methylene blue. iii.Functions of stains.

ii. Shift up and Shift down experiments. iv. Starvation proteins

C. Answer the following questions in short :(Any One) [6]

i. Flagella of DNA ii. Dimensions of microscope prepared by Leewenhoek.

Q IV] 1.(A) Define: (Any One) [2]

i. Metaphase I . ii. Microtubules.

1. (B) Name the following: (any Three) [3]

i. Protein present in nucleopore is known a.....(porin/protein/tubulin)

ii. Other name of meosis II cell division is .....(equational/reductional/terminal)

iii. Microtubules binds at the .....of centromere in chromosome. (primary constriction/secondary constriction/parallel constriction)

iv. Microtubules are made up of ..... protein.(porine/tubulin/microporin)

v. ..... cell always remain in G0 phase.(nerve cell/blood cell/sieve plate)

vi. During mitosis ..... chromatids of a chromosome moves to the opposite pole.(sister/nonsister/homologous.)

2.(A) Answer the following: (Any One) [2]

i. Why animals cannot digest cellulose?

ii. What is specifically reabsorbed and secreted by distal tubule?

2.(B) Answer the following: (Any Three) [3]

i. Trypsin acts on the peptide linkage adjacent to...nd....(Lys &Arg/Lys & Trp/Trp &Arg)

ii. Secretin stimulates pancreatic cell to produce.....in order to neutralize HCL . (CCK/ H2CO3/ zymogen)

iii. CCk is produced in the upper part of the .....(gall bladder/ pancreas/ serosa cell)

iv. Juxtramedullary nephrons are present in ..... part of kidney. (cortex/ medulla/ pelvis)

v. The activity of pancreatic lipase is inhibited by .....(bile/ colipase/ HCl)

vi. HCL is secreted by .....cell of gastric gland of stomata.(serosa cell/ mucosa cell/ beta langerhans cell)

3.(A.) Define : (Any One [2]

i. Unbalanced growth. ii. Generation time.

3.(B) Answer the following: (Any Three) [3]

i. Enlist 1 type of gels employed in microbial growth.

ii. Enlist one method employed to study microorganisms.

iii. Which kind of microscope is used in the laboratory for studying simple cellular structures.

iv. Name one scientist who studied microorganisms in the 16th century.

v. Give one example of medium employed for the microbial culture.

vi. Give examples of microorganisms which are rod shaped.

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