VCD 11022 S.Y.B.Sc Sem III Biochemistry II 3 Hrs Marks 100

Note:

1. All the questions are compulsory. Choice is internal.
2. Figures to the right indicate full marks.
3. All questions carry equal marks.
4. Draw flowcharts/diagrams wherever necessary.

Q.1.A) State True or false: (04)

(i) Gregor Mendel is considered as "Father of Genetics".
(ii) The trait not seen in F1 generation is dominant trait.
(iii)The different forms of alleles are known as genes.
(iv)A phenotype describes the physical expression of a gene.

Q.1.B) Answer of the following: (Any three) (09)

(i) Describe the Contribution of Griffith and Hershey and Chase to the field of genetics.
(ii) Explain with suitable example, what is back cross?
(iii)State and explain law of dominance and segregation.
(iv)Explain the term- Maternal effect.
(v) What is incomplete dominance?
(vi)Write a short note on Epistasis.

Q.1.C) Answer of the following: (Any two) (12)

(i) Explain the concept of Mendelian genetics.
(ii) Describe and explain the concept of Dihybrid cross with examples.
(iii)What are the different types of Epistasis?
(iv)Explain the concept of a) Dominance and b) Recessivity.

Q.2 A) State True or False: (04)

(i) Blood is basic in nature.
(ii) Lymph is an intracellular fluid.
(iii)ADH is a urine formation regulator
(iv)VLDL is very good lipoprotein.

Q.2B) Answer the following: (any three) (09)

(i) Give the name of all blood clotting factors.
(ii) What are the compositions of bile?
(iii)Explain the composition of urine.
(iv)Explain the composition of lymph.
(v) Write a function of blood.
(vi)Comment on lymph characteristics.

Q.2C) Answer the following: (any two) (12)

(i) Write the difference between intracellular fluid and extracellular fluid.
(ii) Give briefly explanation on function of extrinsic blood clotting factors in activation of prothrombin Activator.
(iii)Explain the urine formation with the help of neat and labelled diagram.
(iv) Describe the composition of blood.

Q3 A) State True or False: (04)

(i) GLUT I is most abundant glucose transporter in body
(ii) Lymph circulation is a double circulation.
(iii) Phospholipid is amphoteric in nature.
(iv) Sodium-potassium pump is an example of antiporter diffusion.

Q3 B) Answer the following: (any three) (09)

(i) Write a note on transportation of food in plants.
(ii) What is osmosis?
(iii) How does take place exchange of Oxygen and Carbon dioxide in lungs?
(iv) What is aquaporin?
(v) What is a root pressure? Explain its importance.
(vi) What will happen if ph of blood gets changed?

Q3 C) Answer the following: (any two) (12)

(i) Explain the transportation of calcium.
(ii) What is lipoprotein? Give its Classification.
(iii) Explain the transportation of Fe-Ferritin.
(iv) Explain the transportation of Carbon dioxide.

Q4.A) Define and explain: (Any five) (10)

(i) Monohybrid cross (ii) Genotype (iii) Test cross (iv) Lymphatic vessels
(v) Bowman capsule (vi) Electrolytes (vii) Body fluid

Q4.B) Write short notes on: (Any three) (15)

(i) Write a short note on Gene interaction.
(ii) Note on Co-dominance.
(iii) Write the difference between active transportation & passive transportation.
(iv) Write a note on glucose transporter.
(v) Write difference between channel proteins and carrier proteins.
(vi) Write a note on diluted urine formation.