(j) Alkaptonuria results in the excertion of ..... in urine.

2. (a) Provide a flow-chart of β-oxidation of fatty acid palmitic acid. How many molecule of ATP are generated in complete oxidation of one molecule of palmitic acid?

(b) Provide schematic diagram of replication of DNA.

3. Write short notes on :

(a) Dental caries and role of floride.

(b) Vitamin A and visual cycle.

4. Provide a flow - diagram for glucose break down by glycolysis. Write down its energetics. Indicate various enzymes involved as rate limiting steps. Mention inhibitors of the pathway.

⌘⌘⌘

No. of Printed Pages : 08

Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 2102 Roll No.

BDS Examination August, 2017

(First Professional)

GENERAL ANATOMY PHYSIOLOGY AND BIOCHEMISTRY

Time : 3 Hours] *[Maximum Marks : 70*

Note :– Attempt all the questions in sequence. Write question number in bold letters. Do not do rough work on question paper.

PART - A 35

(Physiology)

1. Multi choice questions : 10×½=5

(a) Movement of particles occurs against concentration gradient in ..... :

(i) Diffusion

(ii) Osmosis

(iii) Active transport

(iv) None

(v) All

(b) Receptors involved in Myasthenia gravis disease is :

(i) Ca receptor

(ii) Ach receptor

(iii) Both

(iv) None

(c) RBC lacks following :

(i) Nucleus

(ii) Mitochondria

(iii) Golgi complex

(iv) All of these

(d) In Haemophilia :

(i) BT↑

(ii) CT↑

(iii) Both↑

(iv) None

(e) Ptyalin is :

(i) Proteolytic enzyme

(ii) Lypolytic enzyme

(iii) Carbohydrate digesting enzyme

(iv) None

(f) One spermatogonium gives rise to :

(i) 128 sperms

(ii) 256 sperms

(iii) 512 sperms

(iv) None

(g) Product of Heart Rate × stroke volume is :

(i) Cardiac index

(ii) Cardiac output

(iii) Both

(iv) None

(h) Shock is :

(i) Sudden unconsciousness

(ii) ↓ tissue perfusion

(iii) ↓ cardiac output

(iv) All of these

(v) None

(i) Normal platelet count in humans is :

(i) 1 – 2 lacs/mm^3

(ii) 1.5 – 4 lacs/mm^3

(iii) 5 – 6 lacs/mm^3

(iv) More than 6 lacs/mm^3

(j) Hormons not secreted by thyroid :

(i) T_3

(ii) T_u

(iii) TSH

(iv) Reverse T_3

2. What is shock, classify and give its mechanism of development? 10

3. Write short notes on : 5×2=10

(a) Oxygen carrying capacity of blood

(b) GFR

4. Comment upon the following : 5×2=10

(a) Hemostasis

(b) Contraception

PART - B 35

(Biochemistry)

Note :– Draw neat, well labelled diagrams of flow-chart wherever necessary.

[P. T. O.

1. Multi choice questions : $10 \times \frac{1}{2} = 5$

(a) Rapoport pathway takes place in :

(i) Muscle

(ii) Liver

(iii) Erythrocytes

(iv) Kidney

(b) In sickle cell anaemia, in globin chain of Hb :

(i) Single amino acid glutamate is substituted by valine

(ii) The globin synthesis is impalanced

(iii) β globin chains are four in numbers

(iv) None of the above

(c) Insulin is a polymer of :

(i) Glucose

(ii) Fructose

(iii) Galactose

(iv) Ribose

(d) Chylomicrons are very rich in :

(i) Tryglycerides

(ii) Cholesterol

(iii) Amino acids

(iv) Fatty acids

Write True of False :

(e) Cytochrome oxidase is a component of electron transport chain.

(f) The histones are proteins containing high concentration of acidic amino acids.

(g) Normal level of sodium in plasma is 136 - 145 MEq/L.

Fill in the blanks :

(h) Gout is due to accumulation of ..... in synovial fluid causing inflammation.

(i) The base pairing (A with T : G with C) is called ..... .