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B. PHARM
15PH403**4th Semester Regular Examination 2016-17****BIOCHEMISTRY****BRANCH: Pharmacy****Time: 3 Hours****Max marks: 100****QUESTION CODE: Z534****Answer Part-A which is compulsory and any four from the Part-B.****The figures in the right hand margin indicate marks.****Part-A (Answer the following questions)****Q.1 Choose the correct answer:****2 x 10**

- a) A water soluble vitamin which is a component of coenzyme A is:
A. Biotin B) Pantothenic acid C) Ascorbic acid D) Retinoic acid
- Fatty acid entry into cytosol requires
- b) A) Fatty acid binding protein B) Albumin
C) Fatty acid binding protein and Na⁺ D) Na⁺
- c) Conversion of Lactate to glucose is known as
A. Glycogenolysis B. Glycogenesis C. Cori Cycle D. Glycolysis
- d) α -Oxidation occurs in
A. Pyruvic acid B. Phytanic acid C. Palmitic acid D. Arachidonic acid
- e) Synthesis of Urea takes place exclusively in
A. Kidney B. Liver C. Muscle D. Urinary bladder
- f) NAD⁺, FAD, and FMN are all cofactors for:
A. Oxidoreductases B. Transferases C. Hydrolases D. Ligases
- g) A competitive inhibitor used in hypertension is:
A. Malonate B. Allopurinol C. Captopril D. Oxaloacetate
- h) α -Oxidation occurs in
A. Pyruvic acid B. Phytanic acid C. Palmitic acid D. Arachidonic acid
- i) The no. of ATP produced in anaerobic phase of glycolysis is
A. 8 B. 10 C. 2 D. 5
- j) The codon (s) that terminate(s) protein biosynthesis
a) UAA b) UAG c) UGA d) All of them

Q.2 Answer the following**2x10**

- a) Define high energy compounds. Explain with examples.
- b) What is Werneke-Karsakoff syndrome?

- c) What is ketosis? Write down the normal ketone body level.
- d) What is translation?
- e) Write down the biological significance of ATP.
- f) What is Rapaport-Leubering cycle?
- g) Define redox potential. Write its significance.
- h) Differentiate between DNA and RNA.
- i) Define essential fatty acids. Give Examples. Mention two functions of it.
- j) What is Fermentation?

Part-B (Answer any Four)

- Q.3** a) What is gluconeogenesis? Mention the various substrates used for it and mention the key enzyme of gluconeogenesis. **5**
- b) What is Glycolysis? Describe the reactions of glycolysis and mention the energetic of this pathway. **10**
- Q.4** a) Discuss about competitive enzyme inhibition. **5**
- b) Define enzyme. Classify it with suitable examples. Describe the factors affecting the enzyme activity. **10**
- Q.5.** a) What do you mean by Xenobiotics? Explain in detail Phase-II detoxification reaction. **10**
- b) Write notes on Transcription. **5**
- Q.6** a) What are the different types of fatty acid oxidation? Describe how fatty acid entering into mitochondrial matrix. **6**
- b) Explain the reaction of β -oxidation of fatty acids. Mention the energy produced in β -oxidation of fatty acids. **9**
- Q.7.** a) Write down the mechanism of enzyme action. **5**
- b) Define Coenzyme, classify it. Write down the biochemical role of PLP and Biotin. **10**
- Q.8** a) Write notes on Glycogenesis. **5**
- b) Describe Pentose phosphate Pathway. Mention its importance. **10**
- Q.9** **Write notes on:-(Any three)** **5x3**
- a) Urea cycle
- b) ATP synthesis
- c) Prostaglandins
- d) Mechanism of transport process
- e) Application of Enzyme