

**RECRUITMENT TO THE POSTS OF
PROVINCIAL MANAGEMENT SERVICE, ETC - 2016**

SUBJECT: ZOOLOGY (PAPER-II)

TIME ALLOWED: THREE HOURS

MAXIMUM MARKS: 100

NOTE: Attempt ONE Question from Each Section.

SECTION-A

Q No. 1: a) Describe the structure, chemical composition and function of ribosomes. How are prokaryotic ribosomes different from eukaryotic ribosomes?

b) What is glycolysis? Give its various steps emphasizing on the steps in which ATP are used or released.

(10 + 10 Marks)

Q No. 2: a) What are different types of RNA? Where are they located in the cell? Describe their role in protein synthesis.

b) Which phases of meiosis and mitosis are similar and which are different? In what ways they are different?

(10 + 10 Marks)

SECTION-B

Q No. 3: a) Describe the role of hemoglobin in the transportation of O₂ and CO₂ in respiration.

b) What mechanism is involved in vertebrate nephron to produce hypertonic urine ?

(10 + 10 Marks)

Q No. 4: a) Discuss the role of hormones, with source of origin, in the regulation of mineral metabolism.

b) Describe in detail the role of Ca⁺⁺ and Ca pump in muscle contraction ?

(10 + 10 Marks)

SECTION-C

Q No. 5: a) What are multiple alleles? Explain with the help of example of ABO blood group system.

b) What is test cross? Give its significance. How it is different from back cross? Explain with the help of examples.

(10 + 10 Marks)

Q No. 6: a) Describe the phenomenon of linkage by suitable example. Why linkage is an exception of law of independent assortment? Explain.

b) What is genetic code? How will you explain that its minimum size should be triplet?

(10 + 10 Marks)

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