**VARDHAMAN MAHAVEER OPEN UNIVERSITY, KOTA**

**Rawatbhata Road, Kota (Rajasthan) - 324021**

**Post Graduate Degree Programme**

**M.Sc. Zoology (Previous)**



**Internal Assignments**

**MSc ZO-01 to MSc ZO-04**

**Session: 2014 - 2015**

**Phone: - 0744-2470615, Fax: - 0744 - 2472525**

**Visit us at: www.vmou.ac.in**

**Vardhaman Mahaveer Open University, Kota**

**Post Graduate Degree Programme**

**M.Sc. Zoology (Previous)**

**Internal Assignments for MSc ZO-01 to MSc ZO-04**

Dear Students,

The following internal assignments of various papers of M.Sc. Zoology (Previous) are being sent to you:

**Programme Code** **Name of the Course/paper**

**MSc ZO-01** Animal Diversity and Ecology

**MSc ZO-02** Cell & Molecular Biology

**MSc ZO-03** Animal Physiology & Physiological Chemistry

**MSc ZO-04** Human Cytogenetic and developmental Biology

It is must to complete the internal assignments and after completion submit the assignments to the Director of your concerned Regional Centre either through your own presence or through registered speed post. Each internal assignment is of 20 marks, the marks obtains in internal assignment will be added with the marks obtained in term end examination. It is mandatory to complete the assignments in your own hand writing. There is no revaluation system for the internal assignment except technical mistakes. After submission of the assignment you will not be given the chance to improve the same or resubmit the same so try to give the best answer in your 1st attempt. Enclose the internal assignments of each paper/course in separate files and provide the below information on the first page of each file:

**Vardhaman Mahaveer Open University, Kota**

**Post Graduate Degree Programme**

**M.Sc. Zoology (Previous)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |

Scholar No.

Name of Student ---------------------------------------------------------------- Internal Assignment No. ----------------------------------------------

Father’s Name ---------------------------------------------------------------- Programme Code ---------------------------------------------------------------

Address ---------------------------------------------------------------- Name of the Course/Paper ------------------------------------------

----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Name of Study Centre --------------------------------------------------------------- Assignment Submission Date---------------------------------------

Name of Regional Centre----------------------------------------------------------

**Note:**

1. Use only A4 Size Paper for your response sheets.

2. Last date of Submission: Before one month from the date of commencement of Term-End Examinations.

**Internal Assignment (Maximum Marks 20)**

**M.Sc. (ZOOLOGY)**

**ANIMAL DIVERSITY AND ECOLOGY**

**MSc ZO-01**

**Max Marks: 20**

**Note : The internal Assignment has been divided into three section A, B, and C, write Answer as per the given instruction.**

**vkrafjd ewY;kadu gsrq iz'u i= 'A', 'B' vkSj 'C' rhu [k.Mksa esa foHkkftr gSA izR;sd [k.M ds funsZ'kkuqlkj iz'uksa dk mÙkj nhft,A**

**Section – A**

**(Very Short Answer Type Questions)**

**Note : Answer all questions. As per the nature of the question you delimit your answer in one word, one sentence or maximum up to 30 words. Each question carries 1 mark. 4x1=04**

**uksV % lHkh iz'ukas dk mÙkj nhft,A vki vius mÙkj dks iz'ukuqlkj ,d 'kCn] ,d okD; ;k vf/kdre 30 'kCnksa esa ifjlhfer dhft;sA izR;sd iz'u 1 vad dk gSA**

**1.**

1. Who purposed Binomial Nomenclature?

**f}uke i)fr fdlus izfrikfnr dh \**

1. Write the names of five kingdoms?

**ikapksa txrks ds uke fyf[k, \**

1. Which animal group posses dermal scales?

**MeZy Ldsy fdl tUrq leqg esa ik;s tkrs gS \**

1. Write the name of National Animal of India?

**Hkkjr ds jk"Vªh; i'kq dk uek fy[kks \**

**Section – B**

**Note : Answer any 2 question. Each answer should not exceed 200 words. Each question carries 4 marks. 2x4=08**

**uksV % fdUgh 02 iz'uksa ds mÙkj nhft,A vki vius mÙkj dks vf/kdre 200 'kCnksa esa ifjlhfer dhft;sa izR;sd iz'u 4 vadksa dk gSA**

1. Define Coelom ?

**lhykse dks ifjHkkf"kr djs \**

1. Write the characters of Mammalia?

**Lrfu;ska ds xq.k fyf[k, \**

1. Draw a well labeled diagram of Integument in Birds ?

**if{k;ksa esa bUVsX;wesUV dk fp= cukb;s \**

1. What is role of Axial Gland in Echinodermata ?

**bdkuksMªesVk ds ,Dlh;y xzfUFk dk D;k dk;Z gS \**

**Section – C**

**Note : answer any one question. You have to delimit your each answer maximum up to 800 words. Each question carries 08 Marks. 1x8=08**

**uksV % fdUgh 01 iz'uksa ds mÙkj nhft,A vki vius mÙkj dks vf/kdre 800 'kCnksa esa ifjlhfer dhft;sa izR;sd iz'u 8 vadksa dk gSA**

1. Write a note on circulatory system in Invertebrates ?

**vd'ksddh;ksa esa lapj.k rU= ij ys[k fy[kks \**

1. What is role of National parks and sanctuaries in Biodiversity conservation, Also write the names of National parks in India ?

**jk"Vªh; m|ku ,oa vH;kj.k;ksa dk tSo fofo/krk laj{k.k esa D;k ;ksxnku gS \ Hkkjr esa ik;s tkkus okys jk"Vªh; m|kuksa ds uke fy[kks \**

**Internal Assignment (Maximum Marks 20)**

**M.Sc. (ZOOLOGY)**

**CELL & MOLECULAR BIOLOGY**

**MSc ZO-02**

**Max Marks : 20**

**Note : The internal Assignment has been divided into three section A, B, and C, write Answer as per the given instruction.**

**vkrafjd ewY;kadu gsrq iz'u i= 'A', 'B' vkSj 'C' rhu [k.Mksa esa foHkkftr gSA izR;sd [k.M ds funsZ'kkuqlkj iz'uksa dk mÙkj nhft,A**

**Section – A**

**(Very Short Answer Type Questions)**

**Note : Answer all questions. As per the nature of the question you delimit your answer in one word, one sentence or maximum up to 30 words. Each question carries 1 mark. 4x1=04**

**uksV % lHkh iz'ukas dk mÙkj nhft,A vki vius mÙkj dks iz'ukuqlkj ,d 'kCn] ,d okD; ;k vf/kdre 30 'kCnksa esa ifjlhfer dhft;sA izR;sd iz'u 1 vad dk gSA**

**1.**

1. Who discover Virus?

**ok;jl dh [kkst fdlus dh \**

1. What is direction of DNA replication?

**Mh-,u-,- izfrdj.k fdl fn'kk esa gksrk gS \**

1. Name the termination code ?

**lekiu dwV ds uke fy[kks \**

1. Name the any two stages of prophase-I ?

**ÝksQst &** I **voLFkk dh dksbZ nks LVst dk uke fy[kks \**

**Section – B**

**Note : Answer any 2 question. Each answer should not exceed 200 words. Each question carries 4 marks. 2x4=08**

**uksV % fdUgh 02 iz'uksa ds mÙkj nhft,A vki vius mÙkj dks vf/kdre 200 'kCnksa esa ifjlhfer dhft;sa izR;sd iz'u 4 vadksa dk gSA**

1. Draw well labelled diagram of Mitochondria ?

**ekbVªksdkW.Mªh;k dk fp= cukvkas \**

1. Write the function of Lamp brush chromosomes?

**ySEiczq'k xq.klq= ds dk;Z fy[kks \**

1. Explain conjugation?

**l;qXeu dks le>kb;s \**

1. What is Translation?

**Vªklyslu D;k gS \**

**Section – C**

**Note : answer any one question. You have to delimit your each answer maximum up to 800 words. Each question carries 08 Marks. 1x8=08**

**uksV % fdUgh 01 iz'uksa ds mÙkj nhft,A vki vius mÙkj dks vf/kdre 800 'kCnksa esa ifjlhfer dhft;sa izR;sd iz'u 8 vadksa dk gSA**

1. Write a note on Electron Microscopy ?

**bysDVªksu ekbØksLdkWih ij ,d ys[k fy[kks \**

1. Write a note on DNA Replication ?

**Mh-,u-,- izfrdj.k ij ,d ys[k fy[kks \**

**Internal Assignment (Maximum Marks 20)**

**M.Sc. (ZOOLOGY)**

**ANIMAL PHYSIOLOGY & PHYSIOLOGICAL CHEMISTRY**

**MSc ZO-03**

**Max Marks: 20**

**Note : The internal Assignment has been divided into three section A, B, and C, write Answer as per the given instruction.**

**vkrafjd ewY;kadu gsrq iz'u i= 'A', 'B' vkSj 'C' rhu [k.Mksa esa foHkkftr gSA izR;sd [k.M ds funsZ'kkuqlkj iz'uksa dk mÙkj nhft,A**

**Section – A**

**(Very Short Answer Type Questions)**

**Note : Answer all questions. As per the nature of the question you delimit your answer in one word, one sentence or maximum up to 30 words. Each question carries 1 mark. 4x1=04**

**uksV % lHkh iz'ukas dk mÙkj nhft,A vki vius mÙkj dks iz'ukuqlkj ,d 'kCn] ,d okD; ;k vf/kdre 30 'kCnksa esa ifjlhfer dhft;sA izR;sd iz'u 1 vad dk gSA**

**1.**

1. What is pH?

pH **D;k gS \**

1. Name any Isomerases enzyme?

**fdlh ,d ^vkblksejst^ ,Tukbe dk uke fy[kks \**

1. How many ATP molecules are generated by complete oxidation of one molecule of glucose?

**,d Xyqdkst v.kq dks vkWDlhdj.k ls fdrus dqy ,Vhih v.kqvksa dk fuekZ.k gksrk gS \**

1. Which are the esters of glycerol with fatty acids?

**Xyhljksy dk olh; vEyksa ds ,LVj vuqcU/k ds mijkUr fdldk fuekZ.k gksrk gS \**

**Section – B**

**Note : Answer any 2 question. Each answer should not exceed 200 words. Each question carries 4 marks. 2x4=08**

**uksV % fdUgh 02 iz'uksa ds mÙkj nhft,A vki vius mÙkj dks vf/kdre 200 'kCnksa esa ifjlhfer dhft;sa izR;sd iz'u 4 vadksa dk gSA**

1. What are benefits of different Vitamins ?

**fofHkUu foVkfeu ds ykHk fy[kks \**

1. Draw weal labeled diagram of Neuron ?

**U;qjksu dk lfp= o.kZu djks \**

1. What is role of myosin in muscles ?

**isf'k;ksa esa ek;ksflu dk D;k jksy gS \**

1. Write general formula of Amino acid ?

**,sfeuksa ,sflM dk lkekU; lq= fy[kks \**

**Section – C**

**Note : answer any one question. You have to delimit your each answer maximum up to 800 words. Each question carries 08 Marks. 1x8=08**

**uksV % fdUgh 01 iz'uksa ds mÙkj nhft,A vki vius mÙkj dks vf/kdre 800 'kCnksa esa ifjlhfer dhft;sa izR;sd iz'u 8 vadksa dk gSA**

1. Write a note on Biosynthesis of fatty acids.

**olh; vEyksa ds tSo fuekZ.k ij ,d ys[k fy[kks \**

1. Write a note on urea cycle and the formation of urine in animals ?

**tUrqvksa esa ;qfj;k pØ rFkk eq= fuekZ.k ij ,d ys[k fy[kks \**

**Internal Assignment (Maximum Marks 20)**

**M.Sc. (ZOOLOGY)**

**Human Cytogenetic and Developmental Biology**

**MSc ZO-04**

**Max Marks : 20**

**Note : The internal Assignment has been divided into three section A, B, and C, write Answer as per the given instruction.**

**vkrafjd ewY;kadu gsrq iz'u i= 'A', 'B' vkSj 'C' rhu [k.Mksa esa foHkkftr gSA izR;sd [k.M ds funsZ'kkuqlkj iz'uksa dk mÙkj nhft,A**

**Section – A**

**(Very Short Answer Type Questions)**

**Note : Answer all questions. As per the nature of the question you delimit your answer in one word, one sentence or maximum up to 30 words. Each question carries 1 mark. 4x1=04**

**uksV % lHkh iz'ukas dk mÙkj nhft,A vki vius mÙkj dks iz'ukuqlkj ,d 'kCn] ,d okD; ;k vf/kdre 30 'kCnksa esa ifjlhfer dhft;sA izR;sd iz'u 1 vad dk gSA**

**1.**

1. Define cytogenetic?

**lkbVkstsusfVDl dks ifjHkkf"kr djs \**

1. Name the sex chromosomes in human beings?

**ekuo esa fyax xq.klq=ksa ds uke fy[kks \**

1. What chromosome is lost in Turner Syndrome?

**Vªuj flUMªkse esa dkSuls xq.klq= dks foyqIrh gks tkrh gS \**

1. At what stage the Blastopore is being formed?

**fdl voLFkk esa CykLVksiksj dk fuekZ.k gksrk gS \**

**Section – B**

**Note : Answer any 2 question. Each answer should not exceed 200 words. Each question carries 4 marks. 2x4=08**

**uksV % fdUgh 02 iz'uksa ds mÙkj nhft,A vki vius mÙkj dks vf/kdre 200 'kCnksa esa ifjlhfer dhft;sa izR;sd iz'u 4 vadksa dk gSA**

1. Write the steps for leukocyte culture?

**Y;qdkslkbV lao/kZu gsrq inksa dk uke fy[kks \**

1. Name the types of mutations?

**mRifjorZuksa ds izdkj fy[kks \**

1. Draw a well labelled diagram of Gastrula stage?

**xsLVªqyk voLFkk dk lfp= o.kZu djks \**

1. Explain the three major steps required for amplification of DNA using PCR?

**ih-lh-vkj- dk iz;ksx ysrs Mh-,u-,- ,EiyhQhds'ku gsrq vko';d rhu dneksa dk la{ksi esa o.kZu djks &**

**Section – C**

**Note : answer any one question. You have to delimit your each answer maximum up to 800 words. Each question carries 08 Marks. 8x1=08**

**uksV % fdUgh 01 iz'uksa ds mÙkj nhft,A vki vius mÙkj dks vf/kdre 800 'kCnksa esa ifjlhfer dhft;sa izR;sd iz'u 8 vadksa dk gSA**

1. Write a note on Fertilization?

**fu"ks'kpu ij ,d ys[k fy[kks \**

1. Write a note on Recombination DNA Technology?

**fjdkWEchusUV Mh-,u-,- VsDuksyksth ij ,d ys[k fy[kks \**

**\*\*\*\*\***