ZàÎÀà-2. t²¦âvuà¡ t¦ qà¥ kàÂà¡ wàv¦ âwâsÂÂà ZàS¦ýàÊ S¦ý ÎàÌS¦ýà¡ S¦ý ràÊ t¦ âvâh¥ ñ

Describe different types of scales found in fish.

OR

sàÊm t¦ qà¥ kàÂà¡ wàv¦ âwxv¦ yqà¡ S¦ý ràÊ t¦ âvâh¥ ñ

Write about the poisonous snakes found in India.

ZàÎÀà-3. ¡ÂàS¦ývÂà ÎàÉÀ S¦ýà ¨uà ¡âsZààu Ñ? qÕàã ¡qÂà¡ wàuwãu kãwÂà S¦ý âv¥ âS¦ýy ZàS¦ýàÊ ¡ÂàS¦ýâvm Ñà¡m¦ Ñ¡ ?

What is the meaning of adaptation? How birds are adapted to arial life?

OR

u¡nàÊuà ¥w¦ t¦¹à¡nàÊuà t¦ ¡¦mÊ âvâh¥ ñ

Write difference between Eutheria and Metatheria.

ZàÎÀà-4. ÐqÊt¦¹à¡kÂàâyy S¦ýL ZàâS¦ýuà S¦ýà w½àÂà S¦ýLâk¥ ñ

Describe process of spermatogenesis.

OR

t¦½S¦ý S¦ý ªàÐ¹¦và S¦ýL h¦»¦ã S¦ýà¹¦ S¦ýà Âààtàâ§ým âjØà rÂàà¢¥ ñ

Draw a well labelled diagram of vertical section of Gastrula of frog.

ZàÎÀà-5. "yªà°¦§ý" qÊ âÂàro âvâh¥ ñ

Write an essay on "Organizer".

OR

t¦ªàJ S¦ý ¡¦»¦ S¦ýL h¦»¦ã S¦ýà¹¦ S¦ýà Âààtàâ§ým âjØà rÂàà¢¥ ñ

Draw a well labelled diagram of vertical section of Hen's egg.

----x----

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Code No. : B-214(B)

Annual Examination - 2017

B.Sc.-I

ZOOLOGY

Paper - II

VERTEBRATE AND EMBRYOLOGY

Max.Marks : 50

Time : 3 Hrs. Min Marks : 17

¹¦ãq ß h½»¦ '¡' t¦ Ày ¡âmvi¦ÙàÊã ZàÎÀà Ñ¡, âkÂÑ¦ Ñv S¦ýÊÂàà ¡âÂàwàu¦ Ñ¡ ñ h½»¦ 'r' t¦ vi¦ÙàÊã ZàÎÀà h½»¦ 'y' t¦ Àã i¦ £ÙàÊãu ZàÎÀà Ñ¡ ñ h½»¦ '¡' S¦ýà yry¦ qÑv¦ Ñv S¦ýÊ¦ ñ

Note: Section 'A' , containing 10 very short answer type questions, is compulsory. Section 'B' consists of short answer type questions and Section 'C' consists of long answer type questions. Section 'A' has to be solved first.

h½»¦-'¡' (Section-'A')

âÂàÈÂàà¦â§ým ¡âm vi¦£ÙàÊãu ZàÎÀàà¦ S¦ý £ÙàÊ ¥S¦ý uà Àà¡ wà¨uà¡ t¦ À¦ ñ (Answer the following very short-answer-type questions in one or two sentences) (1x10=10)

ZàÎÀà-1. Zàà¹¦à§ýà»¦¹¦à kÂm¦ S¦ýà ¥S¦ý £ÀàÑÊ½à ÀãâÂk¥ ñ

Give one example of Protochordata.

ZàÎÀà-2. ¥ÈÄýL ¡à¨yy S¦ý âS¦ýy ¡ªà t¦ ¥½»¦à¦Ð¹¦à¢v qàuà kàmà Ñ¡?

Endostyle is present in which organ of Amphioxus?

ZàÎÀà-3. qØà§ý ÊÕà½à Ñm¦ âS¦ýy ÂàÊ t²¦vã t¦ s½à S¦ýà™¦ qà¥ kàm¦ Ñ¡?

Which male fish has brood pouch for parental care?

ZàÎÀà-4. ªà½à uÊà»¦và S¦ýà ¥S¦ý £ÀàÑÊ½à ÀãâÂk¥ ñ

Give one example from order Urodela.

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ZàÎÀà-5. ¡kªàÊ §ýà wÕààâÀà§ý Âààt âvâh¥ ñ

Write scientific name of python.

ZàÎÀà-6. yàvÂààªvàuÄýy ZàSýàÊ §ýà âwxÀm â§ýy yq t qàuà kàmà Ñ?

In which snake Solenoglyphous type of fang is found ?

ZàÎÀà-7. t¹ànáÊuà kÂm §ýà ¥§ý £ÀàÑÊ½à Àâàk¥ ñ

Give one example of Metatheria.

ZàÎÀà-8. ÍvàÐ¹và §ý tÁu 0Ðnm ªàÑà §ýà Âààt âvâh¥ ñ

Name the cavity present in blastula.

ZàÎÀà-9. âZàâtâ¹w Ð¹âà§ý §ýà qáÊwoÂà â§ýmÂà i¹à t q½à Ñàmà Ñ?

In how many hours is the development of primitive streak completed ?

ZàÎÀà-10. yÕàtmà §ýL ¡woàÊ½àà §ý kÂà§ý §ýàÂà n?

Who propounded the concept of competence?

h½»-'r' (Section-'B')

âÂàÈÂàà¹à§ým vi £ÙàÊàu ZàÎÂàà §ý £ÙàÊ 150-200 ÎàÈÀ-yàtà t À ñ
(Answer the following short-answer type questions with word limit 150-200) **(5x3=15)**

ZàÎÀà-1. yi §ýà»¹à t yàtàÂu vÕà½à âvâh¥ ñ

Give general characters of phylum Chordata.

OR

q¹àtàukàÂà ¥w ât0¨kÂà t ¡mÊ âvâh¥ ñ

Give difference between Petromyzon and Mixine.

ZàÎÀà-2. t²âvuà t §ý¹à»àty Zàwày qÊ â¹Áq½àà âvâh¥ ñ

Write a note on catadromous migration in fish.

OR

¥¨kàvà¹v vàwà qÊ â¹Áq½àà âvâh¥ ñ

Write a note on Exolotal larva.

ZàÎÀà-3. ¡àÊ§ý¢uàÁ¹áÊ¨y §ý yÊãyq wàv vÕà½à âvâh¥ ñ

Write reptilian characters of Archeopteryx.

OR

Zàà¹àànáÊuà §ý yàtàÂu vÕà½à ¥w £ÀàÑÊ½à âvâh¥ ñ

Give general characters and example of Prototheria.

ZàÎÀà-4. t½§ý §ý £vàÐ¹và §ýL h»à §ýà¹ §ýà Âààtàà§ým âjØà rÂàà¢¥ ñ

Draw a well labelled diagram of V.S. Blastula of frog.

OR

Äýà¹và¢âkÂà ¥w ¥Â¹àÄýà¹và¢âkÂà qÊ â¹Áq½àà âvâh¥ ñ

Write a note on fertilizine and antifertilizine.

ZàÎÀà-5. ¡qÊà §ýL qáÊsàxà âvâh¥ mnà ¡qÊà §ý §ýàu âvâh¥ ñ

Define placenta. What are it's functions?

OR

¥ÈÂàà ¡àÂà §ýà âÂàtà½à ¥w £y§ý §ýàu âvâh¥ ñ

Explain formation and functions of Amnion.

h½»-'y' (Section-'C')

âÂàÈÂàà¹à§ým Àà i £ÙàÊàu ZàÎÂàà §ý £ÙàÊ 300-350 ÎàÈÀ-yàtà t À ñ
(Answer the following long-answer type questions with word limit 300-350) **(5x5=25)**

ZàÎÀà-1. ¥ÈÄýL ¡à¨yy §ý ÄýáÊ¨y ¥w £yy yrâom Êj Âàà ¡à §ýà yâjØà w½àÂà §ýLâk¥ ñ

Describe pharynx of Amphioxus and structures related to it. Support the answer with appropriate figures.

OR

¥ÈÄýL ¡à¨yy §ý £ykÂà ¡ª§à §ýà w½àÂà §ýLâk¥ ñ

Describe excretory organ of Amphioxus.