S-662

B.Sc. (Part-III) Examination, 2015

ZOOLOGY

Second Paper

(For regular students Only)

(Biotechnology, Immunology, Biological tools etc)

Time Allowed : Three Hours]   *[Maximum Marks : 75*

Note : Answer five questions in all. Question No.1 is compulsory. Attempt one question from each Unit.

केâjue heeßle ØeÙveeÙkeâ Gòej oeâpeS~ ØeÙve meb1 DeefveJeeÙe&nü ØelÙekeâ FkeâF&mes Skeâ ØeÙve keâeoïeS~

1. Describe briefly the following: $3 \times 10 = 30$

   efvecveefueefKele keâe mebef#ehle efJeJejJce oeâpeS:

   (a) Standard deviation

        ceevekeâ efJeÙeueve

   (b) Humulin

        nÙetcetuueve

   (c) Transgenic animal

        šêvmpeefvekeâ pevleg

   (d) Electrophoresis

        Fuekeâ›ešef›eâj efmeme

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efvecveefueefKele ceÙÙmes keââvneôRoes hej meb[#ehle efSheeCeÙeeBûueekeâS:

(i) mkeââ/velie Fukekešêôve meb#ceoMee

(ii) mhekeešöheôešesceeš j

(iii) Fukekešöheôešs j efmeme

Unit-IV / FkeâF-IV

8. The weight in Kg of ten girl students of B.Sc.-III of 20-25 years old were recorded which are as follows: 11

   50, 45, 48, 52, 47, 45, 51, 55, 53 and 49

   Calculate mean weight and their standard deviation.

   ome Jeer. Sme-meer. IeÌeeÙle Je<e& keâôer 20-25 Je<e& keâôer DeeÙeg keâô ÚeÕeeDeeШkeââ Jepeve keââveeees ceece ceÙ ope&keââÙee ieÙee pees efvecveJelee nü

   50, 45, 48, 52, 47, 45, 51, 55, 53, SJeb 49 GheÙøgáeâ DeekeââÌeukkeââ Deemele Jepeve leLee Fvekeâ ceevekeââ efJeÙeueve keââ ieCevee keââefpeS~

9. Write short notes on the following:

        $5\frac{1}{2} \times 2 = 11$

   (i) Science citation index

   (ii) Correlation coefficient

   efvecveefueefKele hej meb[#ehle efšhheCeÙeeBûueekeâS:

   (i) efJe%eeve meboYe& meÙekeââÙekeââ

   (ii) menmecyevOe ieCeÙekeââ

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(e) Fermentation

efkeâCJeve

(f) Cell mediated immunity

keâesMekeââÙe pee›Ùee Òeeflej#ee

(g) Transmission electron microscope

mešdjeble Fuekeäeše^ve met#ceoMeea

(h) Dendogram

[v[xeece

(i) Variance

ÛemejÙe Ce

(j) ELISA

FueeFpee

Unit-I / Fkeââ›F-I

2. What is recombinant DNA technology? Describe its process and application. 11

hegeÙeecegpe [er.Sve.S Òeeãeesefiekeâer keâlee nî? Fmekeâer ÒeeÌeâÙee Deeyi Devee›Ueiesieb keâe JeCe&ve keââ›keâ peS~

3. Write short notes on the following: 11

(a) Plasmids and episome

(b) Transformation

efveceveefuekeâle hej meb›ehle efšhheCeÙeeBeÙueekeS :

(a) hueeefce›[^ SJeb Sheemeese

(b) heefj›eceve (Šâlmehleâjce›eve)

Unit-II / Fkeââ›F-II

4. Give an account of the structure of immuno-globulin and discuss various types of immu-noglobulins. 11

Òeefleje#ele iuecyeÙetefueve keâer mejÙÛevee keâe JeC keââ›peeS leLee Òeefleje#ee iuecyeÙetefueve keââ eÙeeÙeeVe Òekeâejej½keâer eÙeeJesÙeevee keââ›peeS~

5. Write short notes on the following: 11

(a) Active immunity

(b) Vaccine

efvecveefueekeâele hej mebš#ehle efŠhheCeÙueeBB eueekeS:

(a) meefãeâÙe Òeefllej#ee

(b) Škeâe

Unit-III / Fkeââ›F-III

6. Describe the principle and working of pH meter. State its uses in biological science. 12

heer-SÛe ceeheer keââ efmeaâevle leLee eâeÙeeeMeeOe keâe JeCe™e keââ›peeS~ peeÙe efJe%eeve ceWFmekeââ GheÙeesiieeÙkeââs yeIeeeFÙes-

7. Write short notes on any two of the follow-ing: 6×2=12

(i) Scanning electron microscope

(ii) Spectrophotometer

(iii) Electrophoresis