

30/01/25

O/C

Four-year Undergraduate Examination, 2024
Semester-III
Zoology
Multidisciplinary Course in Zoology (Theory)
Paper: MDZO 01 (Applied Zoology)

Time: 3 hours

Full Marks: 60

Questions are of value as indicated in the margin.

1. Answer **any Six** questions.

2x6=12

- a) Which species of silkworm is responsible for producing Tassar and Muga silk?
- b) Name any two brood diseases of honeybee and their causative organism.
- c) Write the scientific name of two cultivable species of prawn.
- d) Write a brief note on "Flagship species".
- e) Define beta biodiversity.
- f) What is the difference between chemical pesticide and bio- pesticides?
- g) State the location and function of proboscis in mosquito?
- h) Write the scientific name of the causative agent for lymphatic filariasis and mention its infective stage.

2. Answer **any four** of the following questions

4x4=16

- a) Define voltinism. Comment on the types of voltinism observed in silkworms.
- b) What is your understanding about "microbial" and "Plant incorporated" pesticides?
- c) Write any two pests and pathogens that harm bee colony.
- d) Briefly comment on Simpson's index of biodiversity.
- e) Write a short note on different methods to control vector.
- f) What is the role of CITES in biodiversity conservation?

3. Answer **any four** of the following questions

8x4=32

- a) Describe different methods of vermicomposting. Add a note on the factors affecting vermicomposting
4+4=8
- b) Write down the causative agent, symptoms and preventive measures of Pebrine and Muscardine disease in silkworm.
4+4=8
- c) How do bees make honey and how is it further processed for use? Add a note on species of bees used for honey production
3+3+2=8
- d) With suitable example describe how does habitat fragmentation cause loss of biodiversity. Briefly comment on species evenness. List four biodiversity hotspots in the world.
3+3+2=8
- e) Discuss different threatened categories enlisted in Red data book (version 3.1) by the IUCN. List the name of four wildlife sanctuaries in India.
6+2=8
- f) How Amebiasis is transmitted? With the help of a schematic diagram describe the life cycle of *Wuchereria bancrofti*.
2+6=8

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০৮/১১/২৪
Undergraduate Examination (NEP) 2024
Semester-III
Subject AECC / MIL-2
AECC BENG02 Course 2

প্রশ্নের মান দক্ষিণ প্রান্তে উল্লিখিত

Full Marks: 40

Time : 2 Hours

২×১০ = ২০

যে-কোনো দুটি প্রশ্নের উত্তর দাও:

- ১। হাসির গল্প হিসেবে 'কুম্ভীর-বিদ্রাট' ও 'ডমরুধরের হীরকলাভ' গল্প দুটির সার্থকতা বিচার করো।
- ২। ছকভাঙা বাঙালি ছেলে হিসেবে শঙ্কর চরিত্রটি আলোচনা করো।
- ৩। পুরাণের গল্পকথাকে ছোটোদের উপযোগী করে তুলেছেন উপেন্দ্রকিশোর। পাঠ্যগল্প অবলম্বনে বিষয়টি ব্যাখ্যা করো।
- ৪। 'নন্টে ফন্টে' কমিকসের সংলাপের গুরুত্ব বিচার করো।

৫। যে-কোনো চারটি বিষয়ে টীকা লেখো:

৪×৫=২০

- ক) ডমরুধর
- খ) বুনিপ
- গ) ডিয়েগো আলভারেজ
- ঘ) উপেন্দ্রকিশোরের ফটোগ্রাফিচার্চ
- ঙ) 'সন্দেশ' পত্রিকার সম্পাদক উপেন্দ্রকিশোর
- চ) নারায়ণ দেবনাথের কমিক্সে 'বাস্তব'।

विल
28/1/24

Four Year Undergraduate Programme, Examination, 2024

SUBJECT : HINDI

COURSE : AECC-3 (MIL Hindi)

(हिन्दी भाषा और संप्रेषण)

(Questions are of equal value or as indicated in the margin)

Time : 2 hours

Full Marks: 40

1. निम्नलिखित प्रश्नों में से किन्हीं दो के उत्तर दीजिए :

2x12=24

(क) भाषा क्या है ? भाषा की विविध परिभाषा लिखिए।

(ख) भाषा के विविध रूप की चर्चा कीजिए।

(ग) संधि किसे कहते हैं ? संधि के प्रमुख प्रकारों को परिभाषित करते हुए उदाहरण सहित समझाइए।

2. निम्नलिखित प्रश्नों में से किन्हीं दो के संक्षिप्त उत्तर दीजिए :

2x8=16

(क) बलाघात किसे कहते हैं ? उदाहरण देकर स्पष्ट कीजिए।

(ख) स्वर वर्ण किसे कहते हैं ? इसके कितने प्रकार हैं ? उदाहरण के साथ लिखिए।

(ग) अल्पप्राण और महाप्राण व्यंजन किसे कहते हैं ? उदाहरण देकर स्पष्ट कीजिए।

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01C
21/1/25

Four Years Undergraduate Examination, 2024

Semester-III

Zoology

Paper-SEZO-03

(Wildlife Conservation and Management)

Time: 3 Hours

Full Marks: 40

Questions are of value as indicated margin.

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1. Answer **any four** questions of the following 2 × 4 = 8
- (a) Why do animals need cover?
 - (b) What is habitat mix?
 - (c) Draw a labeled diagram of a pugmark of tiger.
 - (d) What do you understand by biosecurity protocol?
 - (e) Write any two roles of CITES
 - (f) How do you differentiate pugmark of male tiger from the female tiger.
2. Answer **any two** questions of the following 4 × 2 = 8
- (a) What are signs of injuries or diseases in wild animals?
 - (b) What are the major threatened categories classified in IUCN?
 - (c) How GIS technology helps wildlife management?
3. Answer **any three** questions of the followings 8 × 3 = 24
- a) Give a brief account on the ethics on wild life conservation and management. 8
 - b) Give an account of the different types of cover that can be constructed for wildlife? 8
 - c) Briefly illustrate different ways of water management for wild life in a habitat? What is habitat mix? 6 + 2 = 8
 - d) Briefly comment on common viral diseases found in wild animals. Mention about any two tiger reserves in India. 5 + 3 = 8
 - e) How to classify fecal remains of wild animals? Give a brief description on the dung survey method. 2 + 6 = 8
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Four Years Undergraduate Examination, 2024
Semester-III
Zoology
[NEP 2020 based Syllabus]
Paper: MJZO 06 (Major) Theory
(Principle of Genetics)

Time: Three hours

Full Marks: 60

Questions are of value as indicated in the margin.

1. Answer *any six* questions from the following

2x6=12

- a) What is cytotet?
- b) What is prophage?
- c) Define prototroph and auxotroph.
- d) Define gene and allele.
- e) Mention the seven pairs of contrasting characters used in Mendel's experiments.
- f) Write on dominant, recessive and co-dominant alleles with suitable examples.
- g) What do you understand by homozygous, heterozygous and hemizygous alleles?
- h) What is inversion? Does crossing over occur within inverted region?

2. Answer *any four* questions from the following:

4x4=16

- a) Write the laws of Mendel. At what circumstances, genes do not follow Mendel's laws of inheritance? 3+1=4
- b) What is recombination frequency? How is it used to calculate map distance between two genes? 2+2=4
- c) Explain deletion and translocation types of chromosomal aberrations with suitable diagrams. 2+2=4
- d) Name two geneticists who rediscovered the Mendel's work and mention their contribution in the field of genetics. 2+2=4
- e) How is donor DNA incorporated into the recipient bacterial genome after transformation. 4
- f) Describe the life cycle of a temperate phage lambda with the help of a suitable diagram. 4

3. Answer *any four* questions from the following

8x4=32

- a) What do you understand by interference (I) and coefficient of coincidence (C.O.C.)? Following are the results of a test cross with three genes A/a, B/b and C/c between a heterozygous female and homozygous recessive male *Drosophila melanogaster* fly:

Genotype	Number
A B C	360
a b c	340
A b c	110
a B C	90
A B c	45
a b C	40
A b C	08
a B c	07

Calculate the map distance between, A, B and C.

2+6=8