

Roll. No.

Question Booklet Number

O.M.R. Serial No.

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B.Sc. (SEM.-V) (NEP) (SUPPLE.) EXAMINATION, 2024-25

ZOOLOGY

(Diversity of Non-chordates and Economic Zoology)

Paper Code

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Question Booklet
Series

A

Time : 1 : 30 Hours

Max. Marks : 75

Instructions to the Examinee :

1. Do not open the booklet unless you are asked to do so.
2. The booklet contains 100 questions. Examinee is required to answer 75 questions in the OMR Answer-Sheet provided and not in the question booklet. All questions carry equal marks.
3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be got immediately replaced.
4. Four alternative answers are mentioned for each question as - A, B, C & D in the booklet. The candidate has to choose the correct / answer and mark the same in the OMR Answer-Sheet as per the direction :

(Remaining instructions on last page)

परीक्षार्थियों के लिए निर्देश :

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।
2. प्रश्न-पुस्तिका में 100 प्रश्न हैं। परीक्षार्थी को 75 प्रश्नों को केवल दी गई OMR आन्सर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। सभी प्रश्नों के अंक समान हैं।
3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR आन्सर-शीट को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका जिसमें कुछ भाग छपने से छूट गए हों या प्रश्न एक से अधिक बार छप गए हों या उसमें किसी अन्य प्रकार की कमी हो, उसे तुरन्त बदल लें।
4. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार सम्भावित उत्तर- A, B, C एवं D हैं। परीक्षार्थी को उन चारों विकल्पों में से सही उत्तर छानना है। उत्तर को OMR उत्तर-पत्रक में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है :

(शेष निर्देश अन्तिम पृष्ठ पर)

1. What is Vermiculture?
 - (A) The cultivation of medicinal plants
 - (B) The breeding and management of earthworms for organic waste decomposition
 - (C) Study of soil erosion
 - (D) The process of composting using chemical fertilizer
2. Which of the following is a major constraint in Pisciculture?
 - (A) Excess nutrients
 - (B) Diseases and parasites
 - (C) Abundance of water
 - (D) Availability of fish feed
3. What is fish feed primarily composed of?
 - (A) Plant and animal protein
 - (B) Plastic
 - (C) Dead decay material
 - (D) Sand and clay
4. Artificial insemination is widely used as:
 - (A) It reduces the cost of feeding animal
 - (B) It allows controlled mating and improves genetic traits
 - (C) It eliminates the need for any veterinary care
 - (D) It decreases the reproductive rate
5. Where do mosquito commonly lay their eggs?
 - (A) In the soil
 - (B) In stagnant water
 - (C) On flowing river
 - (D) Inside tree trunk
6. Which structure is responsible for locomotion in Paramecium?
 - (A) Cilia
 - (B) Foot
 - (C) Pseudopodia
 - (D) Flagella
7. The process by which Paramecium reproduces asexually is called:
 - (A) Binary fission
 - (B) Budding
 - (C) Fragmentation
 - (D) Sporulation
8. Which of the following is responsible for generating the coordinated beating of cilia in Paramecium?
 - (A) Microtubules arranged in a 9+2 pattern
 - (B) Actin filament
 - (C) Intermediate filaments
 - (D) Peptidoglycan

9. Asexual reproduction in Obelia occurs by:
 - (A) Fission
 - (B) Budding
 - (C) Binary division
 - (D) Fragmentation
10. Sexual reproduction in Obelia occurs in the:
 - (A) Hydranths
 - (B) Planula
 - (C) Medusae
 - (D) Statocyst
11. Which of the following is larval stage of Ascaris?
 - (A) Rhabditiform
 - (B) Hexacanth
 - (C) Onchosphere
 - (D) Cysticercus
12. Syncytial epidermis occurs in:
 - (A) Ascaris
 - (B) Hydra
 - (C) Taenia
 - (D) Sycon
13. Why water pH is important in fish farming?
 - (A) It affects fish growth and survival
 - (B) It determines the color of fish
 - (C) It controls pond size
 - (D) It affects taste of fish
14. Fish farming contributes to:
 - (A) Economic development and nutrition security
 - (B) Desertification
 - (C) Industrial pollution only
 - (D) Forest depletion
15. Which factor can cause fish mortality in ponds?
 - (A) High oxygen level
 - (B) Poor water quality
 - (C) Excess feed
 - (D) Sunlight
16. Which of the following is an example of selective breeding?
 - (A) Breeding animal at random
 - (B) Breeding for desirable traits
 - (C) Breeding without considering genetic traits
 - (D) Allowing wild animal to mate freely
17. Which of the following is an effective biological control method for mosquito larvae?
 - (A) Chemical insecticide
 - (B) Introducing larvivorous fish
 - (C) Spraying oil on water
 - (D) Using mosquito repellent

18. Which of the following disease is spread by mosquito?
- (A) Malaria
(B) Tuberculosis
(C) AIDS
(D) Typhoid
19. The main exhalant opening in Sycon is called:
- (A) Ostium
(B) Apopyle
(C) Prosopyle
(D) Osculum
20. What is the function of choanocytes in canal system?
- (A) Provide support
(B) Filter and capture food particles, nutrient distribution
(C) Secrete spicules
(D) Defense
21. Obelia belongs to which class of phylum Cnidaria?
- (A) Anthozoa
(B) Hydrozoa
(C) Scyphozoa
(D) Cubozoa
22. Female Ascaris is differentiable from male in:
- (A) Presence of cloaca
(B) Presence of penial setae
(C) Shorter size
(D) Straight posterior end
23. Body cavity of Ascaris is termed as:
- (A) Coelom
(B) Pseudocoelom
(C) Haemocoel
(D) Coelenteron
24. Embryonated egg of Ascaris is:
- (A) An egg with gastrula
(B) An egg with blastula
(C) An egg with juvenile
(D) An egg within egg
25. Leech is:
- (A) Carnivorous
(B) Ectoparasite
(C) Sanguivorous
(D) Both (B) and (C)

26. Which of the following body feature is typical of leeches?
- (A) Segmented body with parapodia
 - (B) Flattened body with anterior and posterior suckers
 - (C) Unsegmented soft body without appendages
 - (D) Coiled body with radial symmetry
27. Which of the following appendages of Prawns are sensory in function?
- (A) Antennae and antennules
 - (B) Chelipeds and pereopods
 - (C) Pleopods and uropods
 - (D) Telson and carapace
28. What is the nature of reproduction in Prawn?
- (A) Asexual reproduction
 - (B) Binary fission
 - (C) Sexual reproduction
 - (D) Parthenogenesis
29. What temperature range is best for earthworm growth in vermiculture?
- (A) 5°C-15°C
 - (B) 20°C-30°C
 - (C) 40°C-50°C
 - (D) 0°C
30. Vermicompost helps plants by:
- (A) Blocking root development
 - (B) Providing nutrients and improving soil structure
 - (C) Increasing soil acidity
 - (D) Killing bacterial microbes
31. Which of the following is a common fish species cultured in pisciculture?
- (A) Rohu
 - (B) Catla
 - (C) Mrigal
 - (D) All of the above
32. Which type of water body is commonly used in Pisciculture?
- (A) Saltwater lake
 - (B) Artificial ponds and lakes
 - (C) Flowing rivers only
 - (D) Deserts
33. What is the role of aeration in pisciculture?
- (A) It heats the water
 - (B) It increases the water supply to fish
 - (C) It removes all organic matter
 - (D) It makes the water saline

34. Which environmental condition favor termite growth?
- (A) Dry, cold climate
(B) Arid, desert area
(C) Moist, warm environment
(D) High altitude region
35. Which of the following is a major pest of sugarcane known to damage leaves by sucking sap?
- (A) Leafhopper
(B) Aphid
(C) Termite
(D) Beetle
36. Which biological control agent is used to manage sugarcane leafhopper?
- (A) Predatory beetles
(B) Parasitic wasps
(C) Earthworms
(D) Algae
37. How does the Gundhi bug cause damage to sugarcane?
- (A) By boring into roots
(B) By sucking juice from their stem and nodes
(C) By eating leaves only
(D) By spreading fungal disease
38. The outer covering of leech is called:
- (A) Cuticle
(B) Exoskeleton
(C) Epidermis
(D) Chitin layer
39. Leeches can survive long period without feeding due to:
- (A) Their ability to photosynthesize
(B) Storage of large amount of blood in the crop
(C) Continuous consumption of host tissues
(D) Their ability to hibernate in warm temperature
40. Leeches belong to which phylum?
- (A) Annelida
(B) Protozoa
(C) Porifera
(D) Mollusca
41. Fertilization in Prawn is:
- (A) External
(B) Internal
(C) Both (A) and (B)
(D) None of the above

42. The female Prawn carries fertilized eggs attached to:
- (A) Antennae
 - (B) Uropods
 - (C) Pleopods
 - (D) Carapace
43. The body of Pila is covered by a:
- (A) Hard exoskeleton
 - (B) Chitinous shell
 - (C) Calcareous shell
 - (D) Cartilaginous shell
44. The foot of Pila is:
- (A) Divided into segments
 - (B) Broad and muscular
 - (C) Tentacle like
 - (D) Absent
45. The cerebral ganglia in Pila are connected to:
- (A) Pedal ganglia only
 - (B) Visceral ganglia only
 - (C) Both pedal and visceral ganglia
 - (D) Spinal cord
46. The nerve cells in Pila are grouped into clusters called:
- (A) Nephridia
 - (B) Ganglia
 - (C) Cilia
 - (D) Spicules
47. Which is true for Ascaris?
- (A) Host
 - (B) Aquatic
 - (C) Unisexual
 - (D) Bisexual
48. The larva of Taenia present in ripe proglottids is:
- (A) Hexacanth
 - (B) Miracidium
 - (C) Bladderworm
 - (D) Tetracanth
49. Onchospheres occurs in:
- (A) Ascaris
 - (B) Fasciola
 - (C) Taenia
 - (D) Sycon
50. Miracidium is the larval stage of:
- (A) Tapeworm
 - (B) Pinworm
 - (C) Roundworm
 - (D) Liver fluke
51. Which technique is commonly used in modern animal breeding?
- (A) Artificial insemination
 - (B) Natural grazing only
 - (C) Feeding antibiotics
 - (D) Cloning for pets

52. What is the main purpose of animal breeding?
- Increase disease spread
 - Improve productivity and quality
 - Reduce animal numbers
 - Increase feeding cost
53. Termites undergo which type of metamorphosis?
- Complete
 - Incomplete
 - Gradual transformation without molts
 - All of the above
54. The presence of trichocysts in Paramecium serves primarily for:
- Reproduction
 - Defense and capturing prey
 - Photosynthesis
 - Water expulsion
55. Feeding polyps of Obelia are called:
- Gonangia
 - Hydranths
 - Medusae
 - Planula
56. Fertilization in leeches is:
- External
 - Internal
 - Both (A) and (B)
 - None of the above
57. Which of the following is special adaptation of leeches for their feeding habits?
- Presence of jaws with teeth
 - Highly developed digestive glands
 - Presence of spiracles
 - Production of anticoagulant enzyme
58. What is royal jelly?
- A wax secretion
 - A protein rich food fed to larvae and queen
 - Pollen storage
 - Bee venom
59. What is the role of queen bee in a hive?
- Guard the hive
 - Egg laying
 - Gather nectar
 - Build honeycomb
60. Which insect is responsible for lac production?
- Bombex mori*
 - Apis indica*
 - Kerria lacca*
 - Aphid*
61. Lac insect is primarily found on which type of host plant?
- Pine trees
 - Deciduous trees and shrubs
 - Cactus plant
 - Grasses

62. Lac cultivation is best suited to which climate?
- (A) Arid desert
 - (B) Cold mountains
 - (C) Warm and humid tropical
 - (D) Polar
63. Pila shown summer sleep which is known as:
- (A) Hibernation
 - (B) Aestivation
 - (C) Emigration
 - (D) Immigration
64. Which of the following appendages are primarily used for walking in Prawns?
- (A) Antennae
 - (B) Pereopods
 - (C) Pleopods
 - (D) Uropods
65. The first three pairs of appendages used for feeding in Prawns are called:
- (A) Antennules
 - (B) Maxillipeds
 - (C) Walking legs
 - (D) Pleopods
66. How do termites communicate within the colony?
- (A) By visual signals
 - (B) By making noise
 - (C) Through chemical pheromones
 - (D) By electric signals
67. The winged reproductive termites that leave the nest to form colonies are called:
- (A) Workers
 - (B) Alates
 - (C) Pupae
 - (D) Queen
68. Where are leech eggs typically deposited?
- (A) Inside the host's body
 - (B) In water or moist soil
 - (C) In dry sand
 - (D) Attached to the leaves in open sunlight
69. What type of development is observed in leeches?
- (A) Complete metamorphosis
 - (B) Incomplete metamorphosis
 - (C) Direct development
 - (D) Parthenogenesis

70. Which organization promotes apiculture in India?
- (A) ISRO
(B) ICAR
(C) National bee board
(D) DRDO
71. Which part of bee produces wax?
- (A) Abdomen
(B) Mandibles
(C) Wax glands on the underside of abdomen
(D) Antennae
72. Which of the following product of bees is used in cosmetics and medicines?
- (A) Wax
(B) Propolis
(C) Pollen
(D) All of the above
73. The ventral nerve cord of a Prawn runs along the:
- (A) Dorsal side
(B) Lateral side
(C) Ventral side
(D) External surface
74. The reproductive season of Pila is generally:
- (A) Winter
(B) Monsoon
(C) Summer
(D) Autumn
75. The development of Pila is:
- (A) Direct without larval stage
(B) Indirect with tadpole stage
(C) Through a planktonic larva
(D) Through budding
76. Which factor is crucial for the healthy growth of silkworm?
- (A) Low humidity
(B) Direct sunlight for long hours
(C) Controlled temperature and humidity
(D) Frequent water spraying
77. Which stage of silkworm produces silk?
- (A) Egg
(B) Adult
(C) Pupa
(D) Larva
78. Which country is the largest producer of silk?
- (A) India
(B) China
(C) Africa
(D) Sri Lanka

79. The nervous system of Pila is:
- (A) A simple nerve net
 - (B) Brain
 - (C) A well-developed ganglionic system
 - (D) Absent
80. The nerve ring in Pila surrounds which organ?
- (A) Heart
 - (B) Kidney
 - (C) Esophagus
 - (D) Lung
81. What is the primary function of the water vascular system in echinoderms?
- (A) Digestion
 - (B) Excretion
 - (C) Locomotion, respiration, and food transport
 - (D) Locomotion
82. The water vascular system is a network of channels filled with:
- (A) Blood
 - (B) Air
 - (C) Sea water
 - (D) Lymph
83. The radial canal extent into the arms and connect to which structures?
- (A) Tube feet
 - (B) Gonad
 - (C) Respiratory organs
 - (D) Intestine
84. What is Sericulture?
- (A) Study of reptiles
 - (B) Cultivation of silk producing insect
 - (C) Study of soil erosion
 - (D) Farming of aquatic plants
85. What is the main food for silk worm?
- (A) Mulberry leaves
 - (B) Bamboo leaves
 - (C) Grass
 - (D) Tomato
86. What is the primary product obtained from Vermiculture?
- (A) Synthetic fertilizer
 - (B) Honey
 - (C) Wax
 - (D) Vermicompost

87. Selective breeding is based on:
- (A) Random mating
 - (B) Choosing animals with desirable traits
 - (C) Feeding habits
 - (D) Location of farms
88. The nervous system of Prawn consists of:
- (A) A single brain only
 - (B) A pair of cerebral ganglia, suboesophageal ganglion, ventral nerve cord, sensory organs
 - (C) Paired ventral nerve cord
 - (D) A diffuse nerve net
89. Pila lays eggs in:
- (A) Water
 - (B) On aquatic plants
 - (C) On moist surfaces above water
 - (D) Inside its shell
90. The ring canal surrounds which central part of the body in Echinoderms?
- (A) Mouth
 - (B) Anus
 - (C) Spine
 - (D) Eye spot
91. Rodents belong to which order?
- (A) Carnivora
 - (B) Primates
 - (C) Rodentia
 - (D) Lagomorpha
92. What is the primary use of incisors in Rodents?
- (A) Filtering food
 - (B) Chewing plant material and gnawing
 - (C) Swallowing large prey
 - (D) Digging underground burrows only
93. The lateral line system in Pentaceros is used for:
- (A) Breathing
 - (B) Reproduction
 - (C) Detecting water currents and vibrations
 - (D) Excreting waste

94. Where does the mouth of Pentaceros is typically located on its body?
- (A) Dorsally
 - (B) Terminal or slightly inferior
 - (C) On the side of the head
 - (D) Behind the eyes
95. Which of following disease is commonly associated with rodents?
- (A) Malaria
 - (B) Plague
 - (C) Cholera
 - (D) Tuberculosis
96. Which structure helps rodents to process tough plant fibers?
- (A) Crop
 - (B) Gizzard
 - (C) Cecum
 - (D) Pancreas
97. What is the primary food of termites?
- (A) Animal flesh
 - (B) Cellulose from wood and plant material
 - (C) Fruits and nectar
 - (D) Seeds and grains
98. The termite colony is organized into which castes:
- (A) Queens only
 - (B) Hunters
 - (C) Workers, soldiers and reproductives
 - (D) Solitary individual
99. Which type of mouthparts does the Gundhi bug have?
- (A) Chewing
 - (B) Piercing
 - (C) Siphoning
 - (D) Piercing and sucking
100. What is the common method to control Gundhi bug?
- (A) Use of broad-spectrum herbicides
 - (B) Water management and timely harvesting
 - (C) Adding salt to soil
 - (D) Avoiding sunlight exposure

Rough Work

Example :

Question :

Q.1 (A) ● (C) (D)

Q.2 (A) (B) ● (D)

Q.3 (A) ● (C) (D)

5. Each question carries equal marks. Marks will be awarded according to the number of correct answers you have.
6. All answers are to be given on OMR Answer Sheet only. Answers given anywhere other than the place specified in the answer sheet will not be considered valid.
7. Before writing anything on the OMR Answer Sheet, all the instructions given in it should be read carefully.
8. After the completion of the examination, candidates should leave the examination hall only after providing their OMR Answer Sheet to the invigilator. Candidate can carry their Question Booklet.
9. There will be no negative marking.
10. Rough work, if any, should be done on the blank pages provided for the purpose in the booklet.
11. To bring and use of log-book, calculator, pager & cellular phone in examination hall is prohibited.
12. In case of any difference found in English and Hindi version of the question, the English version of the question will be held authentic.

Impt. On opening the question booklet, first check that all the pages of the question booklet are printed properly. If there is any discrepancy in the question Booklet, then after showing it to the invigilator, get another question Booklet of the same series.

उदाहरण :

प्रश्न :

प्रश्न 1 (A) ● (C) (D)

प्रश्न 2 (A) (B) ● (D)

प्रश्न 3 (A) ● (C) (D)

5. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।
6. सभी उत्तर केवल ओ०एम०आर० उत्तर-पत्रक (OMR Answer Sheet) पर ही दिये जाने हैं। उत्तर-पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।
7. ओ०एम०आर० उत्तर-पत्रक (OMR Answer Sheet) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाये।
8. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी OMR Answer Sheet उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें। परीक्षार्थी अपने साथ प्रश्न-पुस्तिका ले जा सकते हैं।
9. निगेटिव मार्किंग नहीं है।
10. कोई भी रफ कार्य, प्रश्न-पुस्तिका में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।
11. परीक्षा-कक्ष में लॉग-बुक, कैल्कुलेटर, पेजर तथा सेल्युलर फोन ले जाना तथा उसका उपयोग करना वर्जित है।
12. प्रश्न के हिन्दी एवं अंग्रेजी रूपान्तरण में भिन्नता होने की दशा में प्रश्न का अंग्रेजी रूपान्तरण ही मान्य होगा।

महत्वपूर्ण: प्रश्नपुस्तिका खोलने पर प्रथमतः जाँच कर देख लें कि प्रश्नपुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्षनिरीक्षक को दिखाकर उसी सिरिज की दूसरी प्रश्नपुस्तिका प्राप्त कर लें।