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SUBJECT CODE NO:- B-2034
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Elective Paper
Zoology Paper-XVI (A) Fishery Science- I

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable labeled diagram.

Q.1 Give an detail account of the general characters and classification of fishes 20

OR

Write in detail about status of freshwater fisheries (past, present and future)

Q.2 Explain in detail about Bombay duck fishery 20

OR

Write short notes on any four of the following

- a) Chilika lake fisheries
- b) Trout fisheries
- c) Milk fish fisheries
- d) Exploitation of reservoir fisheries
- e) Pelagic fisheries
- f) Effect of aquatic pollution on fisheries

Q.3 Select & write correct answers from the given alternatives 10

- 1) The common name of *Sardinella longiceps* is-----
 a) Mackerel b) Trout c) oil sardine d) milk fisheries
- 2) Study of fishes means-----
 a) Ichnology b) Ichthyology c) genecology d) lepidopteriology
- 3) Pullicate lake is -----
 (a) Brackish Water Lake (b) Marine Water Lake
 (c) Fresh water Lake (d) All of these
- 4) D.D.T. is----- pollutants
 (a) Biodegradable (b) Non-biodegradable
 (c) Plastic (d) None of above
- 5) National fisheries Development Board is situated at -----
 a) Delhi b) Mumbai c) Chennai d) Hyderabad
- 6) Jayakwadi reservoir is constructed on -----river
 a) Koyana b) Bhima c) Krishna d) Godavari
- 7) Estimated total length of river in India is about-----
 a) 40,000 Km b) 50,000 Km c) 29,000 Km d) All above

- 8) Cod liver oil is rich in -----
 a) Iron b) Calcium c) Vitamin A d) Vitamin D
- 9) -----detect pressure vibrations & water currents
 a) Lateral Line system b) galls c) Scales d) None of these
- 10) Collection of fish from neutral habitat called -----
 (a) capture fishery (b) culture fishery
 (c) shell fish fisheries (d) fin fishes fishery

OR

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SUBJECT CODE NO:- B-2034
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (B) Animal Culture-I

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- iii) Attempt all questions.
- iv) Illustrate your answer with suitable labeled diagram.

Q.1 Write an essay on wild and domestic species of honey bees 20

OR

Write in detail on cast differentiation and division of work in honey bees.

Q.2 Describe bacterial, viral and fungal diseases of honey bees 20

OR

Write short note on any four of the following

- a) Bee wax
- b) Royal Jelly
- c) Bee venom
- d) Pollen
- e) Economics of bee keeping
- f) Humidity and temperature controls

Q.3 Select and write correct answer from the given alternatives in each sub questions. 10

1. Worker is _____ in honey bees
 - (a) Fertile male
 - (b) Fertile Female
 - (c) Infertile female
 - (d) Infertile male
2. Development of worker bee takes _____ days.
 - a) 18 – 20
 - b) 21 – 22
 - c) 23 – 24
 - d) 24 – 26
3. The behavior of honey bees leaving entire colony to new sites is _____
 - a) Swarming
 - b) Fanning
 - c) dancing
 - d) absconding
4. American foulbrood in honey bees is caused due to _____
 - a) Bacillus
 - b) Amoeba
 - c) Nosema
 - d) Protozoa
5. Sac brood disease of honey bees is caused due to _____
 - a) Bacteria
 - b) Virus
 - c) Fungus
 - d) None
6. Monosaccharides content of honey is _____
 - a) 50 – 60%
 - b) 60 – 65%
 - c) 70 – 75%
 - d) 82 – 90%
7. Bee wax is produced through wax glands of _____
 - a) Queen
 - b) drone
 - c) Pupa
 - d) Worker

8. Bee Venom is used to treat one of the following_____
- (a) Rheumatism (b) dysentery
(c) nausea (d) All above
9. Royal Jelly contains _____sugar
- a) 22 – 25% b) 10 – 17% c) 18 – 20% d) 30 -40%
10. Bee glue contains _____essential oils.
- a) 40% b) 30% c) 10% d) 20%

OR

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FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (C) Entomology - I

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable labeled diagram.

Q.1 Describe general characters of order Thysanura and Collembella with suitable example. 20

OR

Give an account of reproductive system including development in grasshopper.

Q.2 Write an essay on Sericulture. 20

OR

Write short notes on any Four of the following

- a) Cockroaches
- b) Bed bugs
- c) Ametabolous metamorphosis
- d) Preservation of insects
- e) Economic importance of lac
- f) Life cycle of silk worm

Q.3 Select write correct answer from the given alternatives in each sub questions. 10

- 1) Product of silk work is _____.
 - (a) Silk
 - (b) Honey
 - (c) Wax
 - (d) All of these
- 2) There are _____ pairs of large sac in the abdomen of Grasshopper.
 - a) 6
 - b) 8
 - c) 10
 - d) 12
- 3) Queen of Indian bee laying upto _____.
 - a) 500
 - b) 1000
 - c) 1500
 - d) 2000
- 4) Gizzard is the part of _____.
 - (a) Reproductive system
 - (b) Digestive system
 - (c) Nervous system
 - (d) All of these
- 5) Honey is collected in _____.
 - (a) Honey Comb
 - (b) Broad Chamber
 - (c) Super
 - (d) Bottom brood
- 6) Pebrine disease is found in _____.
 - (a) Lac worm
 - (b) Bee worm
 - (c) Silk worm
 - (d) None

- 7) Ecdysone hormone is related to _____
- (a) Fertilization (b) Moulting
(c) Oviposition (d) All of above
- 8) Moulting is called _____
- (a) Instar (b) Pupa
(c) Ecdysis (d) Naids
- 9) Lac is secreted by the _____
- (a) Male lac insect (b) Female lac insect
(c) Bed bug (d) Pediculus
- 10) Govt. of India established the central Silk Board in _____
- (a) 1930 (b) 1935
(c) 1940 (d) 1949

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FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (D) Parasitic Protozoa and Helminthes-I

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable labeled diagram.

- Q.1 Define parasite. Describe types of parasites in detail. 20
 Explain in detail life cycle of p. falciparum OR
- Q.2 Give an account of Eimeria tenella 20
 Write short notes on any four of the following OR
- a) Host parasite relationship
 - b) B. coli
 - c) Giardia intestinalis
 - d) Sporogeny
 - e) Control measures of P. Vivax
 - f) Trophozoite of Trichomonas
- Q.3 Select & Write correct answer from the given alternative in each sub questions 10
- 1) Malaria is transmitted by -----
 (a) Female culex mosquito (b) Female anopheles mosquito
 (c) Male culex mosquito (d) Male anopheles mosquito
 - 2) E. gingivalis is present -----
 a) mucosa of small intestine
 b) colon & rectum
 c) pus pockets of gums
 d) salivary glands
 - 3) Giardia was described by-----
 a) Aristotle b) Renold Ross c) Lambl d) None
 - 4) Common name of Glossina Palpalis is -----
 a) Tse Tse fly b) Sandfly c) butterfly d) None
 - 5) P. falciparum mostly causes -----
 (a) Cerebral malaria (b) fever
 (c) abdominal Pain (d) None of these

- 6) Trichomonas -----transmitted disease
 - a) Air
 - b) Water
 - c) Sexually
 - d) Soil

- 7) Best treatment for Coccidiosis-----
 - (a) Antibiotics
 - (b) Antiviral drug
 - (c) Antipyretic
 - (d) Sulpha drugs

- 8) ----- was coined the phylum Protozoa
 - (a) Robert grant
 - (b) Gegenbaur
 - (c) Lamarck
 - (d) Goldfuss

- 9) Arostyle is present in -----
 - a) Trichomonas
 - b) Giardia
 - c) both a & b
 - d) None

- 10) Undulating membrane is characteristic features of
 - a) Trypanosoma
 - b) B. coli
 - c) E. Gingivalis
 - d) All of these

OR

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SUBJECT CODE NO:- B-2034
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (E) Computer Application & Laboratory Technology -I

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable diagram.

Q.1 What is Computer Programming? Describe with reference to C. 20

OR

What are storage devices? Explain with reference to input devices.

Q.2 Explain the history of computer and write any two application to biology. 20

OR

Write short note on any four of the following

- a) E-mail
- b) www Services
- c) MS word
- d) ROM
- e) Unix
- f) Printer

Q.3 Select and Write correct answer from the given alternative in each sub-questions. 10

1. Which of the following command of DOS is used to clear the screen?

- a) CIS
- b) REN
- c) DEL
- d) COPY

2. Which key combination is used in MS. Word to print a file?

- a) Ctrl + S
- b) Ctrl + P
- c) Ctrl + V
- d) Ctrl + X

3. GUI stands for

- a) Graphical user interface
- b) Geographical user interface
- c) Geological user interface
- d) None of these

4. To get to the end of the document in MS-Word press the keys-----
 - a) Alt + Home
 - b) Ctrl + Home
 - c) Ctrl + End
 - d) Alt + End
5. The maximum Length allowed for Primary name of a file DOS-----
 - a) 8
 - b) 12
 - c) 3
 - d) None
6. Operation System is a -----
 - a) Application Software
 - b) Computer Language
 - c) Application hardware
 - d) System hardware
7. WWW Stands for
 - a) Why Where Which
 - b) World Wide Web
 - c) World Wide Work
 - d) Internet
8. Which of the following is the first operating system in Windows.
 - a) Windows 4.3
 - b) Windows a5
 - c) Windows XP
 - d) Windows 7
9. When a file or folder is deleted it will parked in
 - a) ROM
 - b) RAM
 - c) Recycle bin
 - d) None of Above
10. What is the DOS command to clear the screen
 - a) DIR
 - b) COPY
 - c) DEL
 - d) CLS

OR

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SUBJECT CODE NO:- B-2034
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (F) Bio Technology-I

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable labeled diagram.

Q.1 Define Biotechnology? Explain scope and Importance in detail. 20

OR

What is biotechnology? Explain old and new Biotechnology.

Q.2 Define restriction enzyme? Give an account on nomenclature and it's types 20

OR

Write short note on any four of the following:

- a) Micro injection
- b) Colony blotting
- c) Gene gun
- d) Autoradiography
- e) Plasmid
- f) PCR

Q.3 Select and write correct answer from the given alternatives in each sub questions 10

1) STSs are the physical mark of DNA which are detected by _____

- a) CAPS
- b) PCR
- c) RELP
- d) None

2) The enzyme α amylase is used to treat _____ disorder

- (a) Skin ulcer
- (b) digestive
- (c) leukemia
- (d) deworming

3) β – lactamase is used as an enzyme to treat the diseases _____

- (a) leukemia
- (b) digestive disorder
- (c) blood clot
- (d) penicillin allergy

4) _____ are involved in elimination reaction resulting in the removal of a group of items from the substrate molecule.

- (a) lysases
- (b) isomerases
- (c) hydrolases
- (d) none

5) _____ are those enzyme which catalyze hydrolytic reaction.

- (a) transferases
- (b) ligases
- (c) hydrolases
- (d) oxido reductases

6) Chemicals used for gene transfer methods include _____

- (a) Polyethylene glycol
- (b) CaCl_2
- (c) dextran
- (d) All of these

- 7) mRNA are converted into _____
a) rDNA b) cDNA c) dNTPS d) All
- 8) Insulin is secreted by the _____
a) Testes b) liver c) Islet of Langerhans d) None
- 9) Cohen et.al. (1973) reported the cloning DNA by using _____ as vector.
a) Plasmid b) phage c) Cosmid d) All of these
- 10) Recombinant transformation was developed by _____ in 1979.
(a) Jackson et.al. (b) Benton & Davis
(c) Mandell and Higa (d) none

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FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (G) Dairy Science –I

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable labeled diagram.

Q.1 What is microorganism? Give a detailed account, classification of microorganism. 20

OR

Write an Essay on Indian dairy product.

Q.2 Define Khoa? Give a detailed account of methods of production and defects of Khoa. 20

OR

Write short note on any four of the following

- a) Gradding of milk
- b) Food and nutritive value of Dahi
- c) Channa based sweet
- d) Storage of milk
- e) Cooling of milk
- f) Clean milk production

Q.3 Select and write correct answer from the given alternatives 10

- 1) During Fermentation milk -----is converted into acid
 - a) Glucose b) Lactose c) Fructose d) Sucrose
- 2) Psychrotropic bacteria grow at ----- temperature
 - a) 20 – 40°C b) above 40°C c) Below 47°C d) 5-7°C
- 3) Which of the following packaging materials cannot resist sterilization and freezing process_____?
 - a) Polyvinyl chloride (PVC) b) Polythene c) Polyester d) None of these
- 4) Pasteurized milk is _____
 - a) Fresh milk b) packed milked c) Skimme milk d) None of these
- 5) Cream is a fat containing fraction separated from milk by_____
 - a) Centrifugation b) Pasturization c) Condensation d) Rotation
- 6) Organism present in the curd are mainly _____
 - a) Strepto-cocci b) lactobacillus casie c) Both a & b d) None of these
- 7) The Coagulation temperature for preparation of channa is generally_____
 - a) 70°C b) 80°C c) 60°C d) 50°C

- 8) Khoa is used in _____
a) Gulab Jamun b) Pedha c) Barfi d) All of these
- 9) Which is not dairy product
a) Dahi b) Khoa c) Channa d) Isenglass
- 10) The specific gravity of fat of milk is _____
a) 0.93 b) 0.09 c) 1.00 d) 0.97

OR

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SUBJECT CODE NO:- B-2034
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (H) Poultry Sciences-I

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable labeled diagram.

- Q.1 Give an detail account of American and Mediterranean poultry breeds 20
 OR
 Describe reproductive system of poultry breeds.
- Q.2 Give an account of management of Incubators 20
 OR
 Write short notes on any four of the following
- a) Fertility
 - b) Selection
 - c) Mating
 - d) Humidity
 - e) Control
 - f) Breed Club
- Q.3 Select and write correct answer from the given alternatives in each sub questions 10
1. White Cornish is the example of _____ breed
 (a) Mediterranean (b) American
 (c) Asiatic (d) English
 2. Causal organism of ranikhet disease of poultry is _____
 a) Fungus b) Virus c) Protozoa d) None
 3. When male and female of same breed are crossed, it is known as _____
 (a) outcrossing (b) Cross breeding
 (c) Inbreeding (d) None of above
 4. _____breed is also known as indian game fowl.
 a) Nurie b) Kajal c) tekar d) Aseel
 5. Sperm of fowl remains alive in the oviduct for _____
 (a) 2 – 3 days (b) 4 – 5 weeks
 (c) 2 – 3 weeks (d) 5 – 6 weeks
 6. Egg of poultry contains _____yolk
 (a) 30 – 36% (b) 40 – 46%
 (c) 50 -56% (d) None

7. Lipid contents in poultry fresh egg yolk is _____
a) 42-45% b) 52-55% c) 30-35% d) 60-65%
8. The poultry meat should be preserved below _____ temp for consumption.
a) 20°C b) 10°C c) 15°C d) 9°C
9. Average age of poultry for fair egg laying _____
a) 62-70 weeks b) 52-60 weeks c) 20-26 weeks d) 30-36 weeks
10. Iron contents in poultry egg is _____
a) 2.6 mg b) 3.6 mg c) 1.6 mg d) 4.6 mg