

## Integrated LL.B. Sem.-2 Examination

IL - 112

Legal History

August 2021

Time : 2-00 Hours]

[Max. Marks : 60

*Instructions*

- a) Attempt any three questions.  
b) All question carry equal marks.

1	Critically discuss the functioning of the Mayor's Court of 1726 existing during the East India Company rule. Cite some case of Mayor's court as example.	20
2	Discuss how the Raja Nand Kumar's case was and evidence of the system of justice delivered by the Supreme Court, 1774.	20
3	Short Notes: a. Role of Governor b. Pagoda Case	20
4	Critically analyse The Government of India Act, 1919.	20
5	Write a note on the various Disciplinary Powers under The Advocates Act, 1961.	20
6	Write a note on Charter Act, 1853 and the Second Law Commission.	20

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## B.Sc. Sem.-6 Examination

CC - 311

Environmental Science

Time : 2-00 Hours]

August 2021

[Max. Marks : 50

1. (A) Describe features and various approaches used for fungal classification. 7  
(B) Discuss chemistry and ultrastructure of fungal mycelia with diagram. 7
  2. (A) Explain the general characteristics of Fungi. 7  
(B) Discuss distinguishing characteristics of major classes of fungi. 7
  3. (A) Describe taxonomic status, reproduction and importance of *Agaricus bisporus*. 7  
(B) Define heterokaryosis and explain events forming a heterkaryon in fungi. 7
  4. (A) Explain mating systems among fungi. 7  
(B) Write a detailed note on parasexual cycle. 7
  5. (A) What is medical mycology ? Explain in details any one mycosis type. 7  
(B) Explain methods employed to diagnose fungal infections. 7
  6. (A) Write symptoms, causes and control of Cutaneous mycosis. 7  
(B) Describe the causative agents, treatment and control of Systematic mycosis in details. 7
  7. (A) List secondary metabolites produce by fungi and explain production and importance of any one in detail. 7  
(B) Explain potential of fungi as powerful tool for bioremediation. 7
  8. (A) Explain the role of fungi in bioremediation. 7  
(B) Describe methods for preservation of fungal cultures. 7
  9. Answer in short: (Any eight) 8
- Q-1 Cell wall of fungi is made up of?
- A Cellulose
  - B Hemicellulose
  - C Chitin
  - D Lignin
- Q-2 Zygomycota are also known as?
- A Bread Moulds
  - B Fungi Imperfecti

- C Sac Fungi  
D Club fungi
- Q-3 Thread like filaments which form the plant body of fungi are  
A Rhizoids  
B Hypha  
C Sclerotia  
D Pellet
- Q-4 When a moist bread is kept exposed in air, it becomes mouldy and black because  
A Spores are present in the water  
B Spores are present in the air  
C Spores are present on bread  
D All of the above
- Q-5 Agaricus is a member of  
A Ascomycota  
B Basidiomycota  
C Zygomycota  
D Deuteromycota
- Q-6 Zygospore of Rhizopus/ Mucor germinates to form  
A Mycelium  
B Promycelium  
C Hypha  
D Germtube
- Q-7 The common yeast Schizosaccharomyces follows which of the following asexual reproduction methods?  
A Binary Fission  
B Budding  
C Fragmentation  
D Spore formation
- Q-8 No sexual stage is found in which class of fungi?  
A Ascomycota  
B Basidiomycota  
C Zygomycota

M120-3

D Deuteromycota

Q-9 Special hyphal tips which absorb nutrients from the host in parasitic fungi

A Rhizoids

B Hypha

C mycelium

D Haustoria

Q-10 Ecological importance in terms of bio indicators of pollution is

A Lichens

B Mycorrhiza

C Neurospora

D None

Q-11 Number of ascospores present in one ascus after completion of meiosis is?

A 2

B 4

C 6

D 8

Q-12 Correct sequence for the sexual cycle of fungi starting from the haploid organism can be?

I. Plasmogamy

II. Karyogamy

III. Meiosis

IV. Mitosis

A I-II-III

B I-II-IV

C IV-III-I

D III-I-II

Q-13 Aplanospores are\_\_\_\_\_

A Motile sporangiospores

B Non-motile sporangiospores

C Oidia

D Chlamydozoospores

P. T. O

- Q-14 Which scientist divided fungi in three divisions?
- A Alexopoulos and Mims
  - B Smith
  - C G.C. Ainsworth
  - D All of the above
- Q-15 Heterokaryosis is a character noticed in\_\_\_\_ -
- A Endomycorrhizal Fungi
  - B Ectomycorrhizal Fungi
  - C Plant roots
  - D None of them
- Q-16 The Endomycorrhizas are also known as\_\_\_\_
- A Intracellular mycorrhiza
  - B Vesicular Arbuscular Mycorrhiza
  - C Mat forming mycorrhiza
  - D All of them
- Q-17 Fungus diseases that occur on the nails, skin, hair are referred to as
- A Cutaneous mycoses
  - B Subcutaneous mycoses
  - C Superficial mycoses
  - D Opportunistic mycoses
- Q-18 Black piedra is a fungus infection of the \_\_\_\_\_
- A Skin
  - B Nail
  - C Hair
  - D All of the above
- Q-19 The systemic mycoses are caused mainly by
- A Air borne organisms
  - B Soil borne organisms
  - C Water borne organisms
  - D Food borne organisms
- Q-20 Who discovered Parasexuality among the following?
- A Smith
  - B G.C. Ainsworth
  - C Rothmaller
  - D Pontecarvo and Roper

**SECTION I: Attempt any three**

Q1.	List different types of Enzyme reactors & discuss in detail about any three types.	(14)
Q2.	Discuss immobilized enzymes with reference to types, methods of immobilization. Explain with proper diagram.	(14)
Q3.	Write a note on Genetically modified foods	(14)
Q4.	A. Discuss the advantages of Probiotics.	(07)
	B. Briefly explain Single Cell Proteins.	(07)
Q5	Explain different approaches and types of Gene therapy	(14)
Q6	Write a note on	
	A. Subunit vaccines	(07)
	B. DNA Finger printing technique	(07)
Q7	Write a note on Biofertilizers and state its advantages & disadvantages	(14)
Q8 A	Explain: <i>In situ</i> and <i>Ex situ</i> Bioremediation. List their advantages	(07)
B	Discuss: Biodegradation of Naphthalene	(07)
	<b><u>SECTION II: Attempt any Eight</u></b>	(08)
Q1	Draw a schematic diagram of a biosensor & label it.	(01)
Q2	Give one objective of enzyme engineering?	(01)
Q3	Name the different types of enzyme biosensor.	(01)
Q4	What is the use of site directed mutagenesis in Enzyme engineering?	(01)
Q5	Which was the first Genetically modified crop?	(01)
Q6	Define Probiotics.	(01)
Q7	Name any one enzyme and its use in Food industry	(01)
Q8	Which enzyme is used to convert Starch to Dextrins in process of Beer making?	(01)
Q9	What any two vectors used in gene therapy	(01)
Q10	What are VNTRs	(01)

P. T. O.

M141-2

Q11	Give any one advantage of DNA vaccines	(01)
Q12	Name any two cell sources for tissue engineering	(01)
Q13	Give two examples of recalcitrant compound	(01)
Q14	What is phyto remediation	(01)
Q15	What is Biostimulation	(01)
Q16	Give one example of phosphate solubilising bacteria	(01)



M1141-3

July -2021

B.Sc., Sem.-VI

ELECTIVE -311 : Biochemistry

(ENDOCRINOLOGY)

Time : 2-00 hrs

Total marks : 50

Instruction : All Questions in **Section I** carry equal marks

**Attempt any THREE** questions in Section I

Questions IX in **Section II** is **Compulsory**

- Q.I A Write a brief note on characteristic of hormone 7  
B. Describe role of hormones a secondary messenger 7
- Q.II A Explain types of gland hormones of each gland 7  
B. Describe any one model of hormone actions 7
- Q.III A. Describe chemistry and biosynthesis of thyroid hormone 7  
B. Explain hyperthyroidism 7
- Q.IV A Explain diseases associated with parathyroid hormone 7  
B Write a brief note on Calcium homoestatis 7
- Q.V A. Write the role of insulin and glucagon in the human body 7  
B Write a note on chemistry of pancreatic hormone 7
- Q.VI A Explain Diabetes mellitus in detail. 7  
B. Explain biosynthesis of pancreatic hormone 7

P. T. O

M141 - 4

- Q.VII A. Write the biosynthesis of hormones of adrenal cortex 6  
B. Discuss in biosynthesis of hormones of gonads 8
- Q.VIII A. Discuss the chemistry of hormone of adrenal medulla 7  
B. Write a note chemistry of hormones of gonads 7

## SECTION II

Answer (any 8) of the following 8

1. Name the hormone is synthesized by alpha cell of islets of langerhans of Pancreas  
a. Progesterone      b. estrogens      c. Glucagon      d. Insulin
2. Name the elements is required for the synthesis of thyroid hormone.  
a. iodine      b.sulfur      c. Iron      d. Zinc
- 3.Which hormone is synthesized by Gonads  
a. Insulin      b. Progesterone      c. Glucagon      d. TSH
4. Where the epinephrine is secreted in the human body ?  
a . adrenal medulla   b. islets of langerhans   c. Thyroid gland   d. Intestine
5. Which of the following gland can be classified as an endocrine and an exocrine gland ?  
a. Thyroid      b. Thymus      c. Pancreas      d. Pituitary

M141 - 5

6. Which of the following is/are the female gonads?  
a. Ovary      b. Ova      c. Testis      d. Testicles
7. Which hormone stimulates the production of testosterone  
a. FSH      b. LSH      c. ESH      d. LH
8. Give the full form of LH ?  
a. lethal hormone      b. Ligamentous hormone      c. Lutain hormone  
d. Luteinizing hormone
9. What is location of secretion of Epinephrine and Non epinephrine ?  
a. adrenal cortex      b. adrenal paracortex      c. adrenal medulla  
d. Pancreas
10. How many polypeptide chain of amino acid in Glucagon  
a. 1      b. 2      c. 3      d. 4
11. Which of the following is protein hormone?  
a. Oxytocin      b. Insulin      c. TSH      d. Antidiuretic hormone
12. Name the disease result in low level of adrenal cortex hormones  
a. Goitre      b. Diabetes      c. Addison disease      d) Cushing syndrome
13. Where ADH perform its functions?  
a. Loop of henle      b. Collecting ducts of testes      c. Collecting tubules of kidneys  
d. PCT

P. T. 0

M141 - 6

14. Which of the following hormone stimulates the growth of eggs in the ovaries.

- a. LH                      b. BSH                      c. LSH                      d. FSH

15. Which of the following hormone is known as flight and fight hormone?

- a. Thyroxin      b. Adrenaline      c. ADH                      d. Oxytocin

16. . Which of the following is a male sex hormone

- a. Estrogen                      b. Androgen\_                      c. Insulin                      d. Pheromones
-

3/22

**0308M142**

Candidate's Seat No : \_\_\_\_\_

**B.Sc. Sem.-6 Examination**

**CC - 311**

**Computer Science**

**August 2021**

**Time : 2-00 Hours]**

**[Max. Marks : 50**

**Instructions: All Questions in SECTION I carry equal marks.  
Attempt any THREE questions in SECTION I  
Question 9 in SECTION II is COMPULSORY**

**SECTION I**

- Q-1 Write the following.**
- (A) What is Security? Explain computer security models and terms in detail. (07)
- (B) Explain the types of security attacks in detail. (07)
- Q-2 Write the following.**
- (A) What is the cyber security? Explain the need of cyber security. (07)
- (B) Explain the basic of computer and DOS commands in detail. (07)
- Q-3 Write the following.**
- (A) Explain all the cyber security model in detail. (07)
- (B) Explain computer security, information security, and information assurance in detail. (07)
- Q-4 Write the following.**
- (A) Explain firewall concept in detail. (07)
- (B) Explain interrelated components of the computing environments. (07)
- Q-5 Write the following.**
- (A) Explain security governance in detail. (07)
- (B) Explain management models, roles and its functions in detail. (07)
- Q-6 Write the following.**
- (A) Explain cryptography with public and private key. (07)

P. T. 0

M142 - 2

(B) What is algorithm? Explain the algorithm of public key and private key. (07)

Q-7 Write the following.

(A) What is cybercrime? Explain the history of cyber crime. (07)

(B) Explain cyber crime with information security. (07)

Q-8 Write the following.

(A) Give the classification of cyber crime with Indian perspective. (07)

(B) Give the example of cyber crime with case study. (07)

## SECTION II

Q-9 MCQ (Attempt any eight) (08)

(1) In which of the following, a person is constantly followed/chased by another person or group of several peoples?

A) Phishing B) Bulling C) Stalking D) Identity theft

(2) Which one of the following can be considered as the class of computer threats?

A) Dos Attack B) Phishing C) Soliciting D) Both A and C

(3) Which of the following usually observe each activity on the internet of the victim, gather all information in the background, and send it to someone else?

A) Malware B) Spyware C) Adware D) All of the above

(4) It can be a software program or a hardware device that filters all data packets coming through the internet, a network, etc. it is known as the \_\_\_\_\_:

A) Antivirus B) Firewall C) Cookies D) Malware

(5) Which cyber security principle states that Security mechanisms should be as simple and small as possible?

A) Fail-safe defaults B) Least Privilege  
C) Economy of mechanism D) Open Design

(6) Which cyber security principle principle restricts how privileges are initialized when a subject or object is created?

A) Fail-safe defaults B) Least Privilege  
C) Complete mediation D) Open Design

M142 - 3

- (7) "If the boss demands root access to a UNIX system that you administer, he/she should not be given that right unless he/she has a task that requires such level of access" is the example of which cyber security principle?  
A) Separation of Privilege      B) Least Privilege  
C) Complete mediation      D) Open Design
- (8) Which principle states sometimes it is more desirable to record the details of intrusion than to adopt a more sophisticated measure to prevent it?  
A) Work Factor      B) Psychological acceptability  
C) Least Common Mechanism      D) Compromise Recording
- (9) \_\_\_\_\_ is the process or mechanism used for converting ordinary plain text into garbled non-human readable text & vice-versa.  
A) Malware Analysis      B) Exploit writing  
C) Reverse engineering      D) Cryptography
- (10) When plain text is converted to unreadable format, it is termed as \_\_\_\_\_  
A) rotten text      B) raw text      C) cipher-text      D) ciphen-text
- (11) Cryptographic algorithms are based on mathematical algorithms where these algorithms use \_\_\_\_\_ for a secure transformation of data.  
A) secret key      B) external programs      C) add-ons      D) secondary key
- (12) Cryptography can be divided into \_\_\_\_\_ types.  
A) 5      B) 4      C) 3      D) 2
- (13) The first computer virus is -----  
A) I Love You      B) Blaster      C) Sasser      D) Creeper
- (14) McAfee is an example of \_\_\_\_\_  
A) Photo Editing Software      B) Quick Heal      C) Virus      D) Antivirus
- (15) Which of the following is known as Malicious software?  
A) illegalware      B) badware      C) malware      D) maliciousware
- (16) VIRUS stands for  
A) Very Intelligent Result Until Source  
B) Very Interchanged Resource Under Search  
C) Vital Information Resource Under Siege  
D) Viral Important Record User Searched
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## B.Sc. Sem.-6 Examination

CC - 311

Statistics

August 2021

[Max. Marks : 50]

Time : 2-00 Hours]

*Instructions*

1. There are two sections in this question paper.
2. All questions in Section – I carry equal marks.
3. Attempt ANY THREE questions from Section – I.
4. Section – II is compulsory.
5. Figures to the right indicate full marks of the questions/sub-questions.

**SECTION - I**

- |     |      |  |   |
|-----|------|--|---|
| Q.1 | (a)  | With respect to population, explain, population growth and discrete population growth.   | 7 |
|     | (b)  | State various factors that affect growth pattern of a population.  | 7 |
| Q.2 | (a)  | Describe continuous time population growth model, role of Weibull distribution and its survival function.  | 7 |
|     | (b)  | Explain, in details, Population growth,  | 7 |
| Q.3 | (a)  | Discuss interpretation of odds ratio.  | 7 |
|     | (b)  | A survey was conducted to study liver cancer caused by consuming wine and oily food on a group of people. 58 of 157 people consuming wine but did not expose oily food, compared with 44 of 137 people consuming wine and had oily food. Present the data in a tabular form and find odds ratio. | 7 |
| Q.4 | (a)  | Write a note on odds, odds ratio.  | 7 |
|     | (b)  | Describe, in brief, epidemiology   | 7 |
| Q.5 | (a)  | Explain risk ratio and give its formula.   | 7 |
|     | (b)  | With reference to epidemiology, answer the following:  | 7 |
|     | (i)  | Explain utility of measures of association.  |   |
|     | (ii) | Define relative risk.  |   |
| Q.6 | (a)  | Describe term: "Clinical Trials" In how many phases, clinical studies are carried out? State importance of first phase of clinical trials..  | 7 |
|     | (b)  | Explain, in details, Simpson's paradox.  | 7 |
| Q.7 | (a)  | Write a note on clinical trials.   | 7 |
|     |      | Give, in brief, general history of drug discovery.   | 7 |
| Q.8 | (a)  | Give importance of Cross over design in clinical trials.   | 7 |
|     | (b)  | Answer the following:  | 7 |
|     | (i)  | What is evidence based design?   |   |
|     | (ii) | State uses of longitudinal studies.  |   |

**SECTION -II**

- |     |    |   |   |
|-----|----|---|---|
| Q.9 |    | Answer ANY EIGHT from the following:                                    | 8 |
|     | 1  | State one use of clinical trials.                                       |   |
|     | 2  | Give one advantage of epidemiology.                                     |   |
|     | 3  | Define relative risk, also state one use of relative risk.              |   |
|     | 4  | define birth and death rates  |   |
|     | 5  | Write a note on Exponential population growth and give its application. |   |
|     | 6  | Define discrete population growth.                                      |   |
|     | 7  | What is change in population size during a fixed time?                  |   |
|     | 8. | Define Hazard Rate.   |   |
|     | 9  | State the World Estimated Birth rate and death rate for the year 2011.  |   |



## B.Sc. Sem.-6 Examination

CC - 311

Electronics

August 2021

[Max. Marks : 50]

Time : 2-00 Hours]

## SECTION - I

- Q.I (A) Discuss about Basic Telephone Set in detail. Explain Switch Ringer and Hybrid Circuit. 7  
(B) Explain BORSCHT functions in the Subscriber Interface with block diagram. 7
- Q.II (A) Explain the Cordless Phone. Explain its Features & Capabilities. 7  
(B) With the help of block diagram explain Private Telephone System in detail. 7
- Q.III (A) Explain cellular concepts and multiple access in detail with diagram. 7  
(B) Explain EDGE in detail. What makes EDGE faster than GPRS? 7
- Q.IV (A) Explain TDMA and SDMA with diagrams. 7  
(B) Draw block diagram of typical AMPS unit. Give the sequence of operations that occur when a person initiates a cellular telephone call. 7
- Q.V (A) Explain E-mail, File Transfer, WWW, E-commerce, Searches, VoIP and Video over internet protocol. 7  
(B) Discuss Internet Backbone with block diagram. 7
- Q.VI (A) Explain Frame Relay and Asynchronous Transfer Mode with figure. 7  
(B) Draw and explain basic architecture of a SAN. 7
- Q.VII (A) Explain the term Node. Explain MANs, LANs and PANs in detail. 7  
(B) With diagram explain how Hubs & Bridges are used in LAN. 7
- Q.VIII (A) With block diagram explain star topology & ring topology. 7  
(B) Draw and explain types of WLANs. 7

## SECTION – II

- Q.IX Attempt any **EIGHT** 8
- (A) A switch hook is a \_\_\_\_\_ pole mechanical switch.
- (B) Full form of MDMF is \_\_\_\_\_.
- (C) The transceivers in both the portable and the base units use \_\_\_\_\_ duplex operation.
- (D) Most PBXs are set up to handle \_\_\_\_\_ or more telephone interconnections.
- (E) In FDD, \_\_\_\_\_ frequency channels are assigned for transmit and receive functions.
- (F) In AMPS, the receiver is typically a \_\_\_\_\_ conversion superheterodyne.
- (G) Full form of RSSI is \_\_\_\_\_.
- (H) Full form of NAM is \_\_\_\_\_.
- (I) \_\_\_\_\_ is a method that allows different pages or websites to be linked.
- (J) Frame relay is a \_\_\_\_\_ switching protocol.
- (K) Full form of STS is \_\_\_\_\_.
- (L) IP determines the format of the \_\_\_\_\_.
- (M) PANs are referred to as \_\_\_\_\_ networks that are set up for a specific single purpose.
- (N) The primary advantage of the bus is that it is \_\_\_\_\_ than any of the other topologies.
- (O) The most popular and widely used groupware program is \_\_\_\_\_.
- (P) Fiber optic cable is a \_\_\_\_\_ cable consisting of a glass or plastic.



## B.Sc. Sem.-6 Examination

CC - 311

Botany

(Plant Tissue Culture)

August 2021

Time : 2-00 Hours]

[Max. Marks : 50

સેક્શન ૧. કોઈપણ ત્રણ પ્રશ્નના જવાબ આપો

1. વર્ણવો : - ૧૪
  1. બાગાયતવિદ્યા ની ઉપયોગીતા અને અગત્યતા
  2. ફળ પાકોનું વર્ગીકરણ
2. ટૂંકનોંધ લખો : - ૧૪.
  1. બાગાયતવિદ્યા ની શાખાઓ;      2) શાક પાકોનું વર્ગીકરણ
3. ટૂંકનોંધ લખો : - ૧૪.
  1. જૈવિક ખાતરો,      2) જમીન ના પ્રકારો અને જમીનનું pH
4. વર્ણવો : - ૧૪
  1. મૃદા સ્તરીકરણ      2) સેન્દ્રિય ખાતરો
5. ટૂંકનોંધ લખો : - ૧૪.
  1. આરોપણ      2) કટીંગ
6. ટૂંકનોંધ લખો : - ૧૪.
  1. પોટીંગ      2) ટ્રાન્સપ્લાન્ટેશન
7. ટૂંકનોંધ લખો : - ૧૪.
  1. ગ્રીનહાઉસ ઉછેર      2) એરોપોનિક્સ
8. ટૂંકનોંધ લખો : - ૧૪.
  1. હાઇડ્રોયોનિક્સ      2) ઓર્ગેનિક બાગાયત

સેક્શન-૨ તમામ પ્રશ્નો ફરજિયાત છે. તમામના ગુણ સરખા છે.

1. પોમોલોજી એટલે શું?
2. ભારતમાંથી નિકાસ કરવામાં આવતાં બે મરી મસાલાના નામ આપો.
3. વર્મીકમ્પોસ્ટ એટલે શું?
4. "રિપોર્ટિંગ" એટલે શું?
5. "ટોપીયરી" એટલે શું?
6. "લેયરીંગ" એટલે શું?
7. કોઈપણ બે એકવર્ષીયુ સુશોભનની વનસ્પતિના નામ આપો.
8. ટેરેરીયમ એટલે શું?

M145 - 2

B. Sc. SEMESTER-VI, SUBJECT; BOTANY  
ELECTIVE PAPER-311(Horticulture and Gardening)

TIME: 02 hours

MARKS:50

- Instructions: (1) Attempt any three questions from Section-I (total 42 marks)  
(2) All questions are compulsory in Section- II (total 8 marks)  
(3) Illustrate your answers with neat and labeled diagrams

Q1	Write notes on: 1) Scope and importance of Horticulture 2) Classification of Fruit crops	14
Q2	Write notes on:1) Branches of Horticulture 2) Classification of vegetable crops	14
Q3	Write notes on :1) Biofertilizers 2) Soil types and soil pH	14
Q4	Describe : 1)Soil profile 2) organic fertilizer	14
Q5	Write notes on:1) Grafting 2) Cutting	14
Q6	Write notes on:1) Potting 2) Transplantation	14
Q7	Write notes on: 1) Greenhouse cultivation 2) Aeroponics	14
Q8	Write notes on: 1) Hydroponics 2) Organic Gardening	14

Section -II Total: 08 marks

Q1	What is Pomology?
Q2	Name any two species exported from India?
Q3	What is vermicompost?
Q4	What is repotting?
Q5	What is Topiary?
Q6	What is Layering?
Q7	Name any two annual Flowering Plants?
Q8	What is Terrarium?

## B.Sc. Sem.-6 Examination

CC - 311

Zoology

August 2021

Time : 2-00 Hours]

[Max. Marks : 50

## Section I (કોઈ પણ ત્રણ પૂર્ણ લખો)

- Q-1 (A) વિશાળ મધમાખીને કારણો સહિત વર્ગીકૃત કરો. (7)
- (B) મધમાખીની વિવિધ જાતો (Casts) સમજાવો. (7)
- Q-2 (A) વર્ણવો: મધમાખીમાં કોમ્યુનિકેશન. (7)
- (B) વર્ણવો: મધમાખીની વિવિધ જાતિઓ (Species) (7)
- Q-3 (A) મધમાખીનું જીવનચક્ર વર્ણવો. (7)
- (B) વર્ણવો: મધમાખી ઉછેરની પદ્ધતિઓ. (7)
- Q-4 (A) મધનું રાસાયણિક બંધારણ અને અગત્યતા લખો. (7)
- (B) સમજાવો: મધમાખી ઉછેર માટે મધમાખીની પસંદગી. (7)
- Q-5 (A) સીલ્કવોર્મનું જીવનચક્ર સમજાવો. (7)
- (B) સીલ્કવોર્મને કારણો સહિત વર્ગીકૃત કરો. (7)
- Q-6 (A) સીલ્કવોર્મની વિવિધ જાતિઓ (Species) વિષે ટૂંકમાં લખો. (7)
- (B) વર્ણવો: નર અને માદા બોમ્બિક્સ મોરીના બાહ્ય લક્ષણો. (7)
- Q-7 (A) વર્ણવો: સીલ્કવોર્મની સંભાળ (Rearing) (7)
- (B) કકુન અવસ્થા પછીની પ્રક્રિયા સમજાવો. (7)
- Q-8 (A) વર્ણવો: સિલ્કનું રાસાયણિક બંધારણ અને ઉપયોગો. (7)
- (B) વર્ણવો: સીલ્કવોર્મના રોગો. (7)

## SECTION-II

- Q-9 ટૂંકમાં જવાબ લખો (કોઈ પણ આઠ) (8)
૧. રોયલ જેલી શું છે?
૨. રાઉન્ડ ડાન્સ.
૩. મધનો ગુણધર્મ શું છે?
૪. પોલન બાસ્કેટ એટલે શું?
૫. મધમાખીમાં કોમ્યુનિકેશન કોણે સમજાવ્યું?
૬. નપ્શલ ફ્લાઈટ શું છે?
૭. નર મધમાખી (ડ્રોન) નો વિકાસ કેટલા સમયમાં થાય છે?
૮. કોમ્બ ફોઉન્ડેશન
૯. યુનિ-વોલ્ટીન એટલે શું?
૧૦. વ્યાખ્યા લખો: સેરીકલ્ચર
૧૧. મુગા સીલ્કવોર્મનું વૈજ્ઞાનિક નામ લખો.

12. કકુન શું છે?

13. બોમ્બિક્સ મોરી કયા વર્ગનું પ્રાણી છે?

14. બોમ્બિક્સ મોરીમાં કોષેટો નિર્માણ કેટલા દિવસમાં પૂર્ણ થાય છે?

15. મયાન

16. સ્ટીફલિંગ એટલે શું?



**B.Sc. SEM: 6 Zoology Paper-311 (New Course) M146-3**

Time: 2:00 Hrs.

Total Marks: 50

Instructions: All questions in Section –I carry equal marks.  
Attempt any Three questions in Section-I.  
Questions 9 in Section-II are COMPULSORY.

**SECTION-I**

- Q-1 (A) Classify giant honey bee with reasons. (7)  
(B) Explain different castes of honey bees. (7)
- Q-2 (A) Describe: Communication in honey bees. (7)  
(B) Describe: Different species of honey bees. (7)
- Q-3 (A) Describe Life cycle of honey bee. (7)  
(B) Describe: Apiculture methods (7)
- Q-4(A) Write chemical composition and importance of Honey (7)  
(B) Explain: Choice of bees for Apiculture. (7)
- Q-5 (A) Explain Life cycle of Silk worm. (7)  
(B) Classify Silk worm with reasons. (7)
- Q-6 (A) Write in brief about different species of silkworm. (7)  
(B) Describe: External features of Male and female bombyx mori. (7)
- Q-7 (A) Describe: Rearing of silkworm (7)  
(B) Explain Post cocoon processing (7)
- Q-8 (A) Describe: Chemical composition and uses of silk (7)  
(B) Describe: Diseases of silkworm (7)

**SECTION-II**

- Q-9 Answer in brief (Any eight) (8)
1. What is Royal Jelly?
  2. Round dance.
  3. What is Nature of honey?
  4. What is Pollen basket?
  5. Who explained communication in honey bees?
  6. What is Nuptial flight?
  7. The development of a male bee (drone) takes how long?
  8. Comb foundation
  9. What is Uni-voltine?
  10. Define: Sericulture.
  11. Write scientific name of Muga silk worm.
  12. What is Cocoon?
  13. Bombyx mori belongs to which class?
  14. Formation of cocoon in bombyx mori complete in how many days?
  15. Machana.
  16. What is Stiffling?

P. T. O.

SECTION-I 11/14/16 - 4

- Q: 1 (A) કેન્સરના વિવિધ પ્રકારોનું વર્ણન કરો. (7)  
(B) કેન્સર કોષોની રચનાકીય લાક્ષણિકતાઓ વિષે નોંધ લખો. (7)
- Q: 2 (A) કેન્સર કોષોની દેહધાર્મિક લાક્ષણિકતાઓનો અહેવાલ આપો. (7)  
(B) કેન્સર નિર્માણનો જનીનિક વિકૃતિવાદ સમજાવો. (7)
- Q: 3 (A) કેન્સર પ્રેરક રસાયણો વિષે નોંધ લખો. (7)  
(B) કેન્સર નિર્માણ માટે જવાબદાર DNA વાયરસ વિષે નોંધ લખો. (7)
- Q: 4 (A) રિટ્રોવાયરસ વિષે નોંધ લખો. (7)  
(B) કેન્સર નિર્માણની ક્રિયાવિધિ સમજાવો. (7)
- Q: 5 (A) પ્રાણીપેશીના સ્થાયીકરણના મહત્વ વિષે નોંધ લખો. (7)  
(B) પ્રાણીઓમાંથી સ્મિઅર અને સ્કવોશ તૈયાર કરવાની પદ્ધતિઓ વર્ણવો. (7)
- Q: 6 (A) પેશી સ્થાયીકરણ માટે અસેટીક એસિડ અને પોટેશીયમ ડાયક્રોમેટના ઉપયોગો સમજાવો. (7)  
(B) સંપૂર્ણ પ્રાણી અને પ્રાણી રચનાઓના કાયમી આસ્થાપનો તૈયાર કરવાની પદ્ધતિ વર્ણવો. (7)
- Q: 7 (A) ઠારણ પદ્ધતિ દ્વારા પ્રાણી પેશીનું સ્થાયીકરણ સમજાવો. (7)  
(B) પેશીને યોગ્ય મધ્યમમાં ડુબડવાની વિધિ વિષે નોંધ લખો. (7)
- Q: 8 (A) વર્ણવો: ઇલેક્ટ્રોન માઈક્રોસ્કોપીમાં વપરાતા અભિરંજકો અને અભિરંજીત કરવાની પદ્ધતિઓ. (7)  
(B) પ્રાણી પેશીના નિર્જલીકરણ વિષે નોંધ લખો. (7)

SECTION-II

- Q: 9 ટૂંકમાં જવાબ લખો (કોઈ પણ આઠ) (8)
- (1) કોષોમાં નેક્રોસીસ એટલે શું?
  - (2) વ્યાખ્યા લખો: કેન્સરની સૌમ્ય ગાંઠ.
  - (3) લ્યુકેમિયા શું છે?
  - (4) કેન્સરગ્રસ્ત કોષોના કોષકંકાલમાં કયા પ્રકારના ફેરફાર જોવા મળે છે?
  - (5) મેટાસ્ટેસિસ એટલે શું?
  - (6) કેન્સર શું છે?
  - (7) એડીનો વાયરસ કયા પ્રકારના કેન્સરનું નિર્માણ કરે છે?
  - (8) રિટ્રોવાયરસીસમાં ઇન્ટિગ્રેઝ ઉત્સેચકનું કાર્ય લખો.
  - (9) ડિપેરાફીનેશન એટલે શું?

- (10) બાષ્પ (Vapour) દ્વારા સ્થાયીકરણનો ઉપયોગ.
- (11) પ્રાણીપેશી સંરચનાના અભ્યાસ માટે લેવામાં આવતા છેદની સરેરાશ જાડાઈ કેટલી હોય છે?
- (12) આયોડીનનો ઉપયોગ જણાવો.
- (13) કોઈ પણ બે કાયમી આસ્થાપન માધ્યમોના નામ આપો.
- (14) D.P.X.નું પૂરું નામ લખો.
- (15) કેનેડા બાલ્સમ (Canada balsam)
- (16) કોઈ પણ એક કોષકેન્દ્ર અભિરંજકનું નામ લખો.

**B.Sc. SEM: 6 Zoology Paper-311 (Old Course) M146-6**

Time: 2:00 Hrs.

Total Marks: 50

Instructions: All questions in Section –I carry equal marks.  
Attempt any Three questions in Section-I.  
Questions 9 in Section-II are COMPULSORY.

**SECTION-I**

- Q: 1 (A) Describe various types of Cancer. (7)  
(B) Write a note on morphological characteristics of cancer cells. (7)
- Q: 2 (A) Give an account of physiological characteristics of cancer cells. (7)  
(B) Explain gene mutation theory of cancer formation. (7)
- Q: 3 (A) Write a note on chemical carcinogens. (7)  
(B) Write a note on DNA viruses inducing cancer. (7)
- Q: 4 (A) Write a note on Retroviruses. (7)  
(B) Explain mechanism of cancer induction. (7)
- Q: 5 (A) Write a note on significance of animal tissue fixation. (7)  
(B) Describe methods of smear and squash preparation from animal sources. (7)
- Q: 6 (A) Explain uses of Acetic acid and Potassium dichromate in tissue fixation. (7)  
(B) Describe method of permanent whole mount slide preparation in detail. (7)
- Q: 7 (A) Explain animal tissue fixation by freezing method. (7)  
(B) Write a note on tissue embedding. (7)
- Q: 8 (A) Describe: Staining and stains for electron microscopy. (7)  
(B) Write a note on animal tissue dehydration. (7)

**SECTION-II**

- Q: 9 Answer in brief (Any eight) (8)
- (1) What is meant by cell necrosis?
  - (2) Define: Benign tumour.
  - (3) What is Leukemia?
  - (4) What kinds of changes are observed in cytoskeleton of cancer cells?
  - (5) What is Metastasis?
  - (6) What is cancer?
  - (7) Which type of cancer is induced by adenoviruses?
  - (8) Write function of integrase enzyme in retroviruses.
  - (9) What is deparaffination?
  - (10) Use of vapor fixation.
  - (11) What is average thickness of routine animal histological sections?
  - (12) Use of Iodine.
  - (13) Give examples of any two permanent mountants.
  - (14) Write full name of D.P.X.
  - (15) Canada balsam
  - (16) Name any one nuclear stain.

1. (A) Describe features and various approaches used for fungal classification.  
(B) Discuss chemistry and ultrastructure of fungal mycelia with diagram. 7
  2. (A) Explain the general characteristics of Fungi. 7  
(B) Discuss distinguishing characteristics of major classes of fungi. 7
  3. (A) Describe taxonomic status, reproduction and importance of *Agaricus bisporus*. 7  
(B) Define heterokaryosis and explain events forming a heterokaryon in fungi. 7
  4. (A) Explain mating systems among fungi. 7  
(B) Write a detailed note on parasexual cycle. 7
  5. (A) What is medical mycology ? Explain in details any one mycosis type. 7  
(B) Explain methods employed to diagnose fungal infections. 7
  6. (A) Write symptoms, causes and control of Cutaneous mycosis. 7  
(B) Describe the causative agents, treatment and control of Systematic mycosis in details. 7
  7. (A) List secondary metabolites produce by fungi and explain production and importance of any one in detail. 7  
(B) Explain potential of fungi as powerful tool for bioremediation. 7
  8. (A) Explain the role of fungi in bioremediation. 7  
(B) Describe methods for preservation of fungal cultures. 7
  9. Answer in short: (Any **eight**) 8
- Q-1 Cell wall of fungi is made up of?
- A Cellulose
  - B Hemicellulose
  - C Chitin
  - D Lignin
- Q-2 Zygomycota are also known as?
- A Bread Moulds
  - B Fungi Imperfecti

C Sac Fungi

D Club fungi

Q-3 Thread like filaments which form the plant body of fungi are

A Rhizoids

B Hypha

C Sclerotia

D Pellet

Q-4 When a moist bread is kept exposed in air, it becomes mouldy and black because

A Spores are present in the water

B Spores are present in the air

C Spores are present on bread

D All of the above

Q-5 Agaricus is a member of

A Ascomycota

B Basidiomycota

C Zygomycota

D Deuteromycota

Q-6 Zygospore of Rhizopus/ Mucor germinates to form

A Mycelium

B Promycelium

C Hypha

D Germtube

Q-7 The common yeast Schizosaccharomyces follows which of the following asexual reproduction methods?

A Binary Fission

B Budding

C Fragmentation

D Spore formation

Q-8 No sexual stage is found in which class of fungi?

A Ascomycota

B Basidiomycota

C Zygomycota

D Deuteromycota

Q-9 Special hyphal tips which absorb nutrients from the host in parasitic fungi

A Rhizoids

B Hypha

C mycelium

D Haustoria

Q-10 Ecological importance in terms of bio indicators of pollution is

A Lichens

B Mycorrhiza

C Neurospora

D None

Q-11 Number of ascospores present in one ascus after completion of meiosis is?

A 2

B 4

C 6

D 8

Q-12 Correct sequence for the sexual cycle of fungi starting from the haploid organism can be?

I. Plasmogamy

II. Karyogamy

III. Meiosis

IV. Mitosis

A I-II-III

B I-II-IV

C IV-III-I

D III-I-II

Q-13 Aplanospores are\_\_\_\_\_

A Motile sporangiospores

B Non-motile sporangiospores

C Oidia

D Chlamydospores

M147 - 4

- Q-14 Which scientist divided fungi in three divisions?
- A Alexopoulos and Mims
  - B Smith
  - C G.C. Ainsworth
  - D All of the above
- Q-15 Heterokaryosis is a character noticed in \_\_\_-
- A Endomycorrhizal Fungi
  - B Ectomycorrhizal Fungi
  - C Plant roots
  - D None of them
- Q-16 The Endomycorrhizas are also known as \_\_\_
- A Intracellular mycorrhiza
  - B Vesicular Arbuscular Mycorrhiza
  - C Mat forming mycorrhiza
  - D All of them
- Q-17 Fungus diseases that occur on the nails, skin, hair are referred to as
- A Cutaneous mycoses
  - B Subcutaneous mycoses
  - C Superficial mycoses
  - D Opportunistic mycoses
- Q-18 Black piedra is a fungus infection of the \_\_\_\_\_
- A Skin
  - B Nail
  - C Hair
  - D All of the above
- Q-19 The systemic mycoses are caused mainly by
- A Air borne organisms
  - B Soil borne organisms
  - C Water borne organisms
  - D Food borne organisms
- Q-20 Who discovered Parasexuality among the following?
- A Smith
  - B G.C. Ainsworth
  - C Rothmaller
  - D Pontecarvo and Roper



**B.B.A. Sem.-6 Examination****CC - 314****Adv. Human Resource Management****Time : 2-00 Hours]****August 2021****[Max. Marks : 50**

- Instructions:** (1) All Questions in **Section I** carry equal marks  
 (2) Attempt any **TWO** Questions in **section I**  
 (3) Question V in **section II** is **COMPLUSORY**

**Section I**

- Q.I A Define employee discipline. Explain various objectives of employee discipline. 10  
 B Explain types of discipline with suitable example. 10
- Q.II A What is training and development? Discuss its significance in organization 10  
 B What is Talent Management? Explain the benefits of talent management. 10
- Q.III A Discuss special issue in mentoring with respect to women and diversified workforce 10  
 B What do you mean by different roles of mentors to protégé -- Explain 10
- Q.IV A What is IHRM? Explain the types of training for International Organization 10  
 B What is innovation management? Explain its process in detail. 10

**Section II**

- Q. V Multiple Choice Questions:(Any 10 out of 15) 10
1. Which of the following is/are statutory provisions concerning Discipline
    - (a) Industrial Employment Act, 1946
    - (b) Industrial Dispute Act, 1947
    - (c) The payment of wages Act, 1936
    - (d) All of the Above
  2. Positive Discipline is also called as \_\_\_\_\_.
    - (a) Self-Imposed discipline
    - (b) Misconduct
    - (c) Performance discipline
    - (d) None of the Above
  3. \_\_\_\_\_ Approach impose penalty and punishment if the rules and regulation framed by the organization are not obeyed or ignored by the members.
    - (a) Negative approach
    - (b) Punitive approach
    - (c) Self-control approach
    - (d) None of the Above
  4. The feature of employee discipline is punitive approach. (True/False)

P. T. 0

M148 - 2

5. Which of the following is/are HRM Approaches towards training and development in organization?
  - (a) Human Capital Approach
  - (b) Contingent Approach
  - (c) Strategic Approach
  - (d) All of the Above Approaches
  
6. Right person in a right job is objective of \_\_\_\_\_ Management.
  - (a) Skill
  - (b) Talent
  - (c) Knowledge
  - (d) Import and Export
  
7. Which of the following is/are the method of training and development?
  - (a) Lectures
  - (b) Conferences
  - (c) Case Study
  - (d) All of the Above
  
8. \_\_\_\_\_ involves moving employees or management trainees to various positions from department to department to broaden their understanding of different aspects of business.
  - (a) Job Rotation
  - (b) Behaviour Modelling
  - (c) Role Play
  - (d) In-basket Training
  
9. One to one mentoring is traditional concept of Mentoring. (True/False)
  
10. \_\_\_\_\_ system is one in which peers often provide mentoring to each other.
  - (a) Buddy
  - (b) Contemporary
  - (c) Team
  - (d) Group
  
11. \_\_\_\_\_ mentoring is based on structured relationship.
  - (a) Formal
  - (b) Informal
  - (c) Both A and B
  - (d) None of the Above
  
12. \_\_\_\_\_ are the citizen of the country in which the headquarters of the MNC is located. (PCN/TCN)
  
13. Repatriation is the process of bringing an expatriate home after he/she has completed the international assignment. (True/False)

M148-3

14. Outdoor oriented programmers can be also known as \_\_\_\_\_.
- (a) Leadership Training
  - (b) Internal Training
  - (c) Survival Training
  - (d) None of the Above
15. Language training involves learning the language of the foreign country.  
(True/False)
- \_\_\_\_\_

