

<b>Seat</b>	
<b>No.</b>	

**B.Sc. (Part - III) (Semester - VI) (CBCS)**

**Examination, April 2024**

**ENGLISH (Compulsory) (Paper - IV)**

**Ability Enhancement Compulsory Course**

**English for Communication**

**Sub. Code : 81667**

**Day and Date : Monday, 01/04/2024**

**Total Marks : 40**

**Time : 2.30 p.m. to 4.30 p.m.**

**Instructions : 1) All questions are compulsory.**

**2) Figures to the right indicate full marks.**

**Q.1 A) Rewrite the following choosing the correct alternative:**

**[3]**

1. Buffalo Bill stays open .....a day, .....a week.
  - a. 12 hours, 3 days
  - b. 6 hours, 2 days
  - c. 24 hours, 7 days
  - d. 20 hours, 5 days
2. Granny's piercing eyes could detect.....
  - a. any disease
  - b. uneasiness
  - c. deep buried pain
  - d. unhappiness
3. The grass lifts its head into flat ..... by the frenzied machine.
  - a. tree
  - b. velvet
  - c. women
  - d. grass

**B. Answer the following questions in one word/ phrase /sentence each. [3]**

1. Who is regarded as the Booker T. Washington of Maharashtra?
2. What is Lachmi doing while chatting?
3. Who cures Govind Singh of his madness?

**Q.2)A) Answer any two of the following questions in 3 to 4 sentences each. [4]**

1. What does the word 'pawn' mean? Which meaning fits this poem?
2. How was the absence of Granny felt by the poetess?
3. What does the grass do?

**B) Write a short note on any one of the following in about 7 to 8 sentences.[4]**

1. Anna's education mission
2. Lachmi

**C) Do as directed [2]**

Write antonym of the following word.

'Aggressive'

Write synonym of the following word.

'Dirty'

**Q.3.A) Build up a short piece of group discussion on the following topics making use of expressions and interactions used in group discussion. [8]**

Save Environment means Save the Earth.

**OR**

Terrorism is serious problem in our country.

**B) You are planning a family trip to your favourite place. Make notes of what you must do to get most out of this trip. Use the 'mind mapping' technique for this purpose. [8]**

**Q.4. Write a summing up or a part of a talk/discussion/Interview/Musical programme on television. [8]**

**OR**

**You happen to be the editor of an English newspaper published from Maharashtra. You are expected to write an editorial on death of a famous film personality.**

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**B.Sc. (Part-III) Semester-VI (CBCS)****Examination, March 2024.****BOTANY****Plant Biochemistry and Molecular Biology (Paper-XIII)****Sub. Code : 81680****Day and Date: Tuesday, 26-03-2024****Total Marks: 40****Time: 02.30 p.m. to 04.30 p.m.**

- Instructions:**
- 1) All questions are compulsory.
  - 2) Figures to the right indicate full marks.
  - 3) Draw neat and labelled diagrams wherever necessary.

**Q.1 Rewrite the following sentences by choosing correct alternatives. (8)**

- 1) ..... contains amylose and amylo-pectins.  
(A) Starch (B) Cellulose (C) Pectin (D) Inulin
- 2) Lactose is made up of .....  
(A)  $\alpha$ -D-Glucose +  $\beta$ -D-Glucose (B)  $\beta$ -D-Galactose +  $\alpha$ -D-Glucose  
(C)  $\beta$ -D-Glucose +  $\beta$ -D-Glucose (D)  $\alpha$ -D-Galactose +  $\beta$ -D-Galactose
- 3) Phospholipids are ..... kind of lipids.  
(A) simple (B) conjugated (C) derived (D) neutral
- 4) In plant cells, lipids are stored in .....  
(A) sphaerosomes (B) mesosomes  
(C) cytosol (D) lysosomes
- 5) ..... is a heterocyclic amino acid.  
(A) Alanine (B) Proline (C) Aspartate (D) Lysine

- 6) The synthesis of mRNA on template DNA is called .....
- (A) transcription (B) translation  
(C) transformation (D) DNA replication
- 7) Anticodon is located on .....
- (A) m-RNA (B) r-RNA (C) t-RNA (D) hn-RNA
- 8) .....is found in DNA but not in RNA.
- (A) Ribose (B) Nitrogenous base  
(C) Deoxyribose (D) Phosphate

**Q.2 Attempt ANY TWO of the following. (16)**

- 1) What are carbohydrates? Explain their classification with suitable example.
- 2) What are lipids? Give brief account of saturated fatty acids.
- 3) Describe the structure and properties of amino acids.

**Q.3 Attempt ANY FOUR of the following. (16)**

- 1) B form of DNA
  - 2) Stereoisomers
  - 3) Significance of lipids
  - 4) Secondary structure of protein
  - 5) Disaccharides
  - 6) Lac Operon
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**B.Sc. (Part-III) (Semester-VI) (CBCS)****Examination, March 2024.****BOTANY****(DSE-F26) Bioinformatics, Biostatistics and  
Economic Botany (Paper - XIV)****Sub. Code : 81681****Day and Date: Wednesday, 27-03-2024****Total Marks: 40****Time: 02.30 p.m. to 04.30 p.m.**

- Instructions:**
- 1) All questions are compulsory.
  - 2) Figures to the right indicate full marks.
  - 3) Draw neat and labelled diagrams wherever necessary.
  - 4) Use of scientific calculator is allowed.

**Q.1 Rewrite the following sentences by choosing correct alternatives. (8)**

- 1) Botanical name of Soybean is .....  
(A) *Arachis hypogea* (B) *Glycine max*  
(C) *Triticum* (D) *Sorghum*
- 2) Floral buds of ..... are used as spices.  
(A) Bay (B) Ginger (C) Clove (D) Garlic
- 3) Middle value in the set of observations is referred to as .....  
(A) Mean (B) Mode (C) Median (D) Range
- 4) In Bioinformatics, PIR stands for .....  
(A) Plating In vivo Resonance (B) Protein Information Resource  
(C) Protein Intensive Rating (D) Public Integration Resource

- 5) In Bioinformatics, BLAST stands for .....
- (A) Basic Local Alignment Search Tool
  - (B) Bits Laying Art System Tuning
  - (C) Basic Lipid Art System Tool
  - (D) Back Laying Art System Tool
- 6) Plant part used of tea plant to prepare beverage is .....
- (A) root
  - (B) stem
  - (C) leaves
  - (D) inflorescence
- 7) Botanical name of black pepper is .....
- (A) *Gossypium arboreum*
  - (B) *Piper nigrum*
  - (C) *Thea comelina*
  - (D) *Solanum nigrum*
- 8) ..... is a database of first-hand information.
- (A) Primary data
  - (B) Secondary data
  - (C) Both (A) and (B)
  - (D) None of these

**Q.2 Attempt ANY TWO of the following. (16)**

- 1) Explain different types of sampling methods in Biostatistics.
- 2) Write in detail about concept of centers of origin with respect to Vavilov's work.
- 3) Explain in detail, Protein Information Resource.

**Q.3 Write short notes on ANY FOUR of the following. (16)**

- 1) Coefficient of variation.
- 2) Economic importance of Gram
- 3) Branches of Bioinformatics
- 4) Morphology of soybean
- 5) Mode and Standard deviation
- 6) Economic importance of black pepper



- v) In plant tissue culture technique, surface sterilization of explant is achieved by .....
- |                      |                     |
|----------------------|---------------------|
| a) hydrochloric acid | b) calcium chloride |
| c) mercury chloride  | d) nitric acid      |
- vi) In geological time scale, the middle life forms are in ..... era.
- |              |               |
|--------------|---------------|
| a) Paleozoic | b) Mesozoic   |
| c) Cenozoic  | d) Archeozoic |
- vii) Northern Blotting technique is used to analyze .....
- |                |                  |
|----------------|------------------|
| a) DNA         | b) RNA           |
| c) RNA and DNA | d) None of these |
- viii) The hard coal is known as .....
- |               |               |
|---------------|---------------|
| a) Anthracite | b) Bituminous |
| c) Lignite    | d) Peat       |

**Q.2) Attempt any two of the following :** [16]

- i) Describe the different enzymes involved in Recombinant DNA technology.
- ii) Describe the different stages of Micro propagation.
- iii) What is PCR technique? Describe the various steps in PCR.

**Q.3) Attempt any four of the following :** [16]

- i) *Enigmocarpon*
- ii) Gene bank
- iii) Cellular differentiation
- iv) Microfossils
- v) Plasmid vector
- vi) Scope of biotechnology



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**B.Sc. (Part - III) (Semester - VI) (CBCS)****Examination, March 2024****BOTANY (Paper - XVI)****Biofertilizers and Herbal Drug Technology****Sub. Code : 81683****Day and Date : Saturday, 30/03/2024****Total Marks : 40****Time : 2.30 p.m. to 4.30 p.m.**

- Instructions :**
- 1) All questions are compulsory.
  - 2) Figures in the right indicate full marks.
  - 3) Draw neat and labelled diagram wherever necessary.

**Q1) Rewrite the following sentences by choosing correct alternatives: [8]**

- a) The authors of Indian Materia Medica are \_\_\_\_\_
  - i. Nadkarni & Nadkarni
  - ii. Deshpande & Nadkarni
  - iii. Deshpande & Vaidya
  - iv. Vaidya & Nadkarni
- b) Rhizobium in the root nodules of leguminous plants help in fixing \_\_\_\_\_
  - i. Oxygen
  - ii. Nitrogen
  - iii. Carbon
  - iv. Hydrogen
- c) \_\_\_\_\_ Volatile oil present in Zingiber officinale.
  - i. Vasicine
  - ii. Gingerol
  - iii. Curcumin
  - iv. Nicotine
- d) The \_\_\_\_\_ of Acacia concinna used in the preparation of herbal Shampoo
  - i. Dry fruits
  - ii. Dry leaves
  - iii. Roots
  - iv. Flowers
- e) The crude drugs arranged according to their Morphological nature are called \_\_\_\_\_
  - i. Chemical classification
  - ii. Sero-taxonomical classification
  - iii. Morphological classification
  - iv. Alphabetical classification

- f) \_\_\_\_\_ compound is responsible for cleansing properties in soap nuts plants
- Alkaloid
  - Saponin
  - Flavonoids'
  - Resin
- g) \_\_\_\_\_ is a botanical name of Shikekai
- Sapindus laurifolius
  - Cocos nucifera
  - Prunus dulcis
  - Acacia concinna
- h) Admixture or substitution of original drug with inferior, defective, harmful substances is known as \_\_\_\_\_
- Extraction
  - Purification
  - Adulteration
  - Evaluation

**Q2) Attempt any two of the following:**

[16]

- Define pharmacognosy and give the medicinal uses of Methi and Amala.
- Explain general methods of extraction, isolation and purification of Phyto-constituents.
- Describe the applications of Santalum album and Jasminum sambac in the herbal cosmetics.

**Q3) Attempt any four of the following:**

[16]

- Medicinal uses of Tulsi
- Methods of chemical classification of crude drugs.
- Applications of Green manure
- Uses of antioxidants
- Importance of Blue Green Algae (BGA) as a biofertilizers.
- VAM fungi.