Total Pages : 8

H-7422

M.Sc. (Semester-II) Examination, 2022

FARM FORESTRY

(Forest Mensuration and Management)

Time Allowed : Three Hours

Maximum Marks : 70

Minimum Passing Marks : 25

Note : Question paper is divided into four sections. Attempt questions from all four sections as per given direction. Distribution of marks is given in each section.

SECTION - A

(Objective Type Questions)

Note : Attempt **any ten** questions. Each question carries **1** mark. [10×1=10]

1 (i) The portion of the tree stem or log which is un-merchantable is called _____ .

(ii) GBH is measured at _____ above the ground level.

(iii) The material that a forest can yield annually or periodically in perpetuity is known as ____ .

(iv) The total fresh / dry weight of any living organism is known as _____ .

(v) Indian Institute of Forest Management is located at ____ .

(vi) Sum of all trees growing in a forest is known as :

(a) Yield

(b) Increment

(c) Rotation

(d) Growing stock

(vii) The quarter girth formula to calculate volume of a log is :

(a) $2g\ell$

(b) $\left(\frac{g}{4}\right)^2 \times \ell$

(c) $g\left(\frac{r}{4}\right)^3 \times h$

(d) $\pi r \ell$

(viii) Bark thickness is measured by the instrument :

(a) Wooden scale

(b) Compass

(c) Swedish bark Guage

(d) Hypsometer

(ix) Forest mensuration deals with the determination of :

(a) Diameter

(b) Height

(c) Volume

(d) All of the above

(x) Metzger's / Girder theory is related to :

(a) Stem Form

(b) Form Height

(c) Sampling

(d) All of the above

(xi) Scientific forest management in India was started by :

(a) Brandis

(b) Troup

(c) Hubers

(d) Champion and Seth

(xii) Which is the smallest permanent working plan unit of management?

(a) Periodic block

(b) Annual coupe

(c) Compartment

(d) Division

SECTION - B

(Very Short Answer Type Questions)

Note : Attempt **any five** questions. Each question carries **2** marks. (Maximum word limit is **25-30** words) [5×2=10]

2. (i) Principles of forest management

(ii) Units of measurement

(iii) Newton's formula

(iv) Site index curves

(v) Forest organization

(vi) Normal forests

(vii) Objects of diameter and girth measurements

SECTION - C

(Short Answer Type Questions)

Note : Attempt **any five** questions. Each question carries **4** marks. (Maximum word limit is **250** words) [5×4=20]

3. (i) General principles of yield regulation.

(ii) Instruments for diameter and girth measurements.

(iii) Stump analysis.

(iv) Remote sensing and GIS in forest management.

(v) Increment and its types.

(vi) Tree stem form.

(vii) Sustainable forest management.

SECTION - D

(Essay Type Questions)

Note : Attempt **any three** questions. Each question carries **10** marks. (More than **500** words) [10×3=30]

4. (i) Define forest mensuration and management. Explain objects and scope of forest mensuration and forest management.

(ii) Describe standard rules governing breast height measurement with suitable diagrams.

(iii) Describe the characteristics, objectives, scope and steps in preparation of working plan.

(iv) Define rotation and describe its types in detail with suitable examples.

OR

What is volume table? Describe the classification and methods of preparation of volume table.

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