



MAHARSHI DAYANAND UNIVERSITY, ROHTAK

(Established under Haryana Act No. XXV of 1975)

'A' Grade University accredited by NAAC

No. ACS-II/F-87/2017/22430-31

Dated : 08.09.2017

To

1. Head, Department of Food Technology, M.D.U,Rohtak
2. Head, Department of Botany, M.D.U., Rohtak

Sub:- Approval of Syllabi of Open Elective Papers from the session 2017-18

Sir/Madam,

I am directed to inform you that the Vice-Chancellor has been pleased to approve the Syllabi of following Open Elective papers as recommended by the PGBOS in Food Technology and PGBOS in Botany in its meeting held on 30.08.2017 in anticipation of the approval of the Faculty of Life Sciences:-

Sr. No.	Name of the Department	Name of Open Elective paper
1	Food Technology	Food Fundamentals
2.	Botany	Plants: Source of Food and Health

Further, the Vice-Chancellor has also approved that the nomenclature of the above papers be included in the list of Open Elective Papers for 3rd semester of PG courses under CBCS from the session 2017-18 for opting by the students.

Further necessary action may be taken accordingly.

Yours faithfully,

-sd-

Superintendent (Academic)

For Registrar

Endst. No. ACS-II/F- 87/2017/22432-479

Dated: 08.09.2017

Copy of the above is forwarded to the following for information and necessary action. The Syllabi may be got downloaded from the University Website and instructions to the students may be imparted accordingly:-

1. All the HODs, M.D.University, Rohtak
2. Director, IQAC, M.D.University, Rohtak
3. Controller of Examinations, M.D.University, Rohtak
4. Director, UCC, M.D.University, Rohtak for uploading on the University Website.
5. Director, Public Relation, M.D.University, Rohtak
6. Assistant Registrar (R-I R-II/R-III, R-IV), M.D.University, Rohtak

-sd-

Superintendent (Academic)

**DEPARTMENT OF BOTANY
OPEN ELECTIVE PAPER**

**M. Sc. Botany
(Semester-III)**

Paper Code: 17BOTO2

Title of Paper: Plants: Source of Food and Health

Max. Marks:80

Internal Assessment: 20

Time: 3 hrs.

Note: The examiner is required to set even questions in all. Question No. 1 will be compulsory and short answer type covering the entire syllabus. The remaining six questions will be set with two questions from each unit. The candidate will be required to attempt four questions - Question 1 and three more questions selecting one from each unit.

Unit- I

Agriculture: origin, history, world centres of primary diversity of domesticated plants, major crops of India, benefits and adverse consequences of green revolution, emerging problems of agriculture sector of India and their possible solutions, concept of organic farming and sustainable agriculture

Unit- II

Horticulture: scope, classification and importance; Important commercial horticultural crops of India and Haryana, some underutilized fruits and vegetables of Haryana, Home gardening and their relevance in present time, Factors affecting horticulture in India, Issues in post harvest management of fruits and vegetables in India

Unit- III

Medicinal Plant: Diversity and distribution, General account of local plants of medicinal importance, Drugs developed from traditional medicines, Bioprospection and biopiracy of medicinal plants, Indian initiatives for promoting the use of medicinal plants, Factors affecting medicinal plants diversity, conservation and management

Food Fundamentals

There will be seven questions in all. The first question comprising of short answer type questions covering the entire syllabus will be compulsory. The remaining eight questions will comprise of a set of two questions from each unit and the candidate will be required to attempt question 1 and four more questions selecting at least one from each unit.

MM: Th 80+IA

20

Time: 3h

Unit I. Food nutrients and balanced diets

Characteristics of basic food groups and their contribution to the diet, Food functions, Nutrients: macronutrient (vitamins, carbohydrates, proteins), micronutrients (minerals), balanced diet: definition, factors affecting balanced diet

Unit II. Food processing and preservation

Objectives of cooking food and cooking methods: different cooking methods, effect of different methods of cooking on nutritive value of food. Food preservatives: chemical preservatives, salt, sugar, oil as food preservative. Food preservation by drying, dehydration, cooling/freezing and thermal processing including sterilization, blanching, pasteurization.

Unit III. Food packaging and labeling

Food packaging and its functions, food packaging & labeling, packaging types, understanding labelling rules & regulations, nutritional labeling: serving sizes, daily values, health claims etc., labelling requirements for pre-packaged foods

Recommended readings:

1. Potter, N.N and Hotchkiss, J.H. Food Science. CBS Publishers and distributors
2. Vieira, E.R. Elementary Food Science. Chapman and Hills publication
3. McWilliams, M. Food Fundamentals. Pearson India Education Services (Indian edition)
4. Training manual for food safety regulators, Volume I. Food safety and Standards Authority of India.