

Unique Paper Code : 2176000002

Name of the Paper : SEC: Chemistry of Food Flavors and Colourants

Name of the Course : All undergraduate courses

Semester : II

Duration : 1hr

Maximum Marks : 30

Instructions for Candidate

All Questions carry equal marks.

Out of 4 questions you need to attempt 2 questions.

Q.1 (a) Give the answer of the following -

- (i) Which compounds are known to produce a bitter taste?
- (ii) What compounds in peppers contribute to their spicy flavor?
- (iii) What type of compounds typically elicit the umami taste?
- (iv) Which pigment is responsible for the yellow color of turmeric?
- (v) Name the compound which creates cooling sensation?
- (vi) What pigment gives oranges their characteristic color?
- (viii) What natural pigment is found in tomatoes?
- (b) Explain, what is the definition of Flavor.
- (c) What are natural food colourants?
- (d) What are some common taste inhibitors?

(1.5x6, 2, 2, 2)

Q. 2 Explain the following –

- (a) What is flavor enhancement. Explain the Umami taste and chemical compound responsible for it.
- (b) What is β -Carotene and how is it used as a colorant?
- (c) What is the main pigment responsible for the vibrant yellow color of turmeric, and what health benefits are associated with it?
- (d) What are Azo dyes, and what are some examples of them?

(5,3,4,3)

Q. 3 Write a short note of the following

- (a) Astringency
- (b) Rancidity of Oil/fat
- (c) Maillard browning
- (d) Taste Inhibition

(4,4,4,3)

Q. 4 (a) Draw the structure of tongue, papillae, taste buds and explain their important role for the taste.

- (b) What is non- nutritive sugar. Explain any one with their chemical structure.
- (c) Compare the structures of aspartame and saccharin.
- (d) What does FD&C stand for.

(5,5,3,2)