

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2021****Subject Code:3151401****Date:27/12/2021****Subject Name:Design and Formulation of Foods****Time:02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

- Q.1** (a) Explain how MyPyramid helps in maintaining right proportion of food in diet **03**
- (b) Explain the nutrition related disorders among adolescents **04**
a) anorexia nervosa and b) bulimia nervosa
- (c) Explain physical, psychological, psychosocial, religious, environmental, geographical factors affecting food choices **07**
- Q.2** (a) Describe the following types of formula milk based on ingredients and preparation. Write full form of DHA and ARA. **03**
- (b) Explain the concept of probiotics and prebiotics using examples. **04**
- (c) Suggest food components which have relieving effect on colic **07**
- OR**
- (c) Describe the nutritional value of rice or wheat **07**
- Q.3** (a) Describe any three nutrition related concerns in elderly people **03**
- (b) Explain the role of hormones involved in lactation. How lactation is more beneficial than the formula milk? **04**
- (c) Describe a therapeutic diet for a patient suffering from diabetes or cardiovascular disease or kidney failure. **07**
- OR**
- Q.3** (a) What is the refueling window and its significance for athletes? **03**
- (b) Explain how gestational diabetes is dangerous for both mother and foetus **04**
- (c) Suggest a menu plan for preschool children. Also calculate the energy and tentative cost of the meal. **07**
- Q.4** (a) Justify “Dehydration is related to hyponatraemia among athletes”. **03**
- (b) Write short note on a) Preeclampsia and b) Constipation in elderly people **04**
- (c) How is MyPyramid similar to MyPlate. Give an example of balanced diet (Lunch) prepared using food pyramid **07**
- OR**
- Q.4** (a) Write the formulation of banana based weaning food containing jaggery **03**
- (b) Enlist the components present in breast milk which are absent in cow milk **04**
- (c) Explain the nutrition related disorders in infants **07**
- Q.5** (a) Calculate the suitable weight gain during pregnancy for a female of height 170 cm and weight 176 lbs. **03**
- (b) Describe the a) pica foods b) protein/ day RDA for elderly person **04**

- (c) How is diabetes caused? Draw diagram of anatomy of the organ concerned with diabetes. **07**
Differentiate between type I and type II diabetes

OR

- Q.5** (a) Explain the significance of fermented foods using examples? **03**
(b) Comment on nutrigenomics and designer foods **04**
(c) Explain the significance of nutrition before, during and after exercise by athletes **07**
