Mae. Food S. Toch.

14P/280/6

| Question | Booklet | No. |
|----------|---------|-----|
| Question | DOORICE | 110 |

|                        |        |          |          |       | _      |       |           |         |                      | <u> </u>       | 150 |
|------------------------|--------|----------|----------|-------|--------|-------|-----------|---------|----------------------|----------------|-----|
|                        |        | (To      | be fille | ed up | by the | cand  | lidate by | blue/bl | lack ball-point pen) |                |     |
| Roll No.               |        |          |          |       |        |       |           |         |                      |                |     |
| Roll No.<br>(Write the | digits | in words | s)       |       |        |       |           |         |                      |                |     |
| Serial No              | of OM  | R Answ   | er She   | et    |        |       |           |         |                      |                |     |
| Day and                | Date   |          |          |       |        | ••••• |           |         | (Signature o         | of Invigilator | r)  |

#### INSTRUCTIONS TO CANDIDATES

(Use only blue/black ball-point pen in the space above and on both sides of the Answer Sheet)

- 1. Within 10 minutes of the issue of the Question Booklet, check the Question Booklet to ensure that it contains all the pages in correct sequence and that no page/question is missing. In case of faulty Question Booklet bring it to the notice of the Superintendent/Invigilators immediately to obtain a fresh Question Booklet.
- 2. Do not bring any loose paper, written or blank, inside the Examination Hall except the Admit Card without its envelope.
- 3. A separate Answer Sheet is given. It should not be folded or mutilated. A second Answer Sheet shall not be provided. Only the Answer Sheet will be evaluated.
- 4. Write your Roll Number and Serial Number of the Answer Sheet by pen in the space provided above.
- 5. On the front page of the Answer Sheet, write by pen your Roll Number in the space provided at the top, and by darkening the circles at the bottom. Also, wherever applicable, write the Question Booklet Number and the Set Number in appropriate places.
- No overwriting is allowed in the entries of Roll No., Question Booklet No. and Set No. (if any) on OMR sheet and also Roll No. and OMR Sheet No. on the Question Booklet.
- 7. Any change in the aforesaid entries is to be verified by the invigilator, otherwise it will be taken as unfair means.
- 8. Each question in this Booklet is followed by four alternative answers. For each question, you are to record the correct option on the Answer Sheet by darkening the appropriate circle in the corresponding row of the Answer Sheet, by ball-point pen as mentioned in the guidelines given on the first page of the Answer Sheet.
- For each question, darken only one circle on the Answer Sheet. If you darken more than one c rcle or darken a circle partially, the answer will be treated as incorrect.
- 10. Note that the answer once filled in ink cannot be changed. If you do not wish to attempt a question, leave all the circles in the corresponding row blank (such question will be awarded zero mark).
- For rough work, use the inner back page of the title cover and the blank page at the end of this Booklet.
- 12. Deposit only the OMR Answer Sheet at the end of the Test.
- 13. You are not permitted to leave the Examination Hall until the end of the Test.
- 14. If a candidate attempts to use any form of unfair means, he/she shall be liable to such punishment as the University may determine and impose on him/her.

  [No. of Printed Pages: 18+2]

[ उपर्युक्त निर्देश हिन्दी में अन्तिम आबरण-पृष्ठ पर दिये गए हैं]

R. 114 | 92 12 1/20/7 [No

#### No. of Questions/प्रश्नों की संख्या : 120

Time/समय : 2 Hours/मण्टे

Full Marks/पूर्णांक: 360

Note/भेट: (1) Attempt as many questions as you can. Each question carries 3 marks. One mark will be deducted for each incorrect answer. Zero mark will be awarded for each unattempted question.

अधिकाधिक प्रश्नों को हरत करने का प्रवत्न करें। प्रत्येक प्रक्रं 3 अंक का है। प्रत्येक गलत उत्तर के लिए एक अंक काटा काएगा। प्रत्येक अनुत्तरित प्रश्न का प्रतान का प्रतान शृत्य होगा।

(2) If more than one alternative answers seem to be approximate to the correct answer, choose the closest one.

बदि एकाधिक वैकल्पिक उत्तर सही उत्तर के निकट प्रतीत हों, तो निकटतम सही उत्तर दें।

1. IARI is located at

(1) Izatnagar

(2) Karnal

(3) Delhi

(4) Hyderabad

2. World Food Day is celebrated on

(1) March 13

(2) May 30

(3) October 16

(4) November 3

3. First Agricultural University established in India is located at

( Manager

(2) Agra

(3) Coimbeture

/1 BB

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| 4.    | . Khaira disease of paddy occurs due to deficiency of |                    |          |                   |               |  |
|-------|---|--------------------|----------|-------------------|---------------|--|
|       | (1) phosphorus  | (2) boron          | (3)      | zinc              | (4) nitrogen  |  |
| 5.    | Which of the follow                                   | ing requires maxi  | imum ir  | rrigation?        |               |  |
|       | (1) Soyabean  | (2) Maize          | (3)      | Paddy             | (4) Lentil    |  |
| 6.    | Malting of barley is                                  | done to activate   |          |                   |               |  |
|       | (1) catalase  |                    | (2)      | pectinase         |               |  |
|       | (3) amylases  |                    | (4)      | polyphenol oxid   | lase          |  |
| 7.    | The two main ingre                                    | dients used for co | uring of | meat are          |               |  |
|       | (1) phosphate and                                     | nitrite            | (2)      | sodium chlorid    | e and nitrite |  |
| •     | (3) iso-ascorbic acid                                 | d and nitrite      | (4)      | sugar and nitri   | te            |  |
| 8.    | Which of the followi                                  | ng is a dough con  | nditione | <b>x</b> ?        |               |  |
|       | (1) Sodium nitrite                                    |                    | (2)      | Sodium sulphite   | e             |  |
|       | (3) SSL   |                    | (4)      | Calcium acetate   | <b>:</b>      |  |
| 9.    | The radiation dose r                                  | equired for comm   | ercial s | terilization of m | neat is       |  |
|       | (1) 5-10 KGy  | (2) 10-20 KGy      | (3) 2    | 20-25 KGy         | (4) 30-40 KGy |  |
| 10.   | Hemagglutinins are                                    | found in           |          | ;                 | •             |  |
|       | (1) linseed   | (2) soyabean       | (3) p    | ootato            | (4) groundnut |  |
| (159) |   | . 2                | 2        |                   |               |  |

| 11.           | The moistur    | re content in butter sh  | ould not be   | more than           |              |
|---------------|----------------|--------------------------|---------------|---------------------|--------------|
|               | (1) 4%         | (2) 8%                   | (3) 12        | 2% (4)              | 16%          |
| 12.           | HTST metho     | od of pasteurization in  | volves a trea | tment of            |              |
|               | (1) 161 °F     | for 15 sec               | (2) 14        | 45 °F for 30 min    |              |
|               | (3) 161 °F     | for 45 sec               | (4) 16        | 55 °F for 10 sec    |              |
| 13.           | Lactose is n   | nade up of               |               |                     |              |
|               | (1) galactos   | e and glucose            | (2) gs        | lactose and fruct   | ose          |
|               | (3) glucose    | and fructose             | (4) gi        | ucose and maltoe    | ·            |
| 14.           | The typical    | flavour of butter obtain | ned from rip  | eried cream is ma   | ainly due to |
|               | (1) acetic a   | cid (2) lactic acid      | (3) pr        | ropionic acid (4)   | diacetyl     |
| 15.           | Pasteurization | on of milk is based on   | destruction   | of following path   | ogen         |
|               | (1) E. coli    |                          | (2) M         | ycobacterium tube   | rculosis     |
|               | (3) Coxiella   | : burnetti               | (4) C         | lostridium botulinu | ım           |
| 16.           | Which of th    | e following has maxim    | um specific   | gravity?            |              |
|               | (1) Water      | (2) Fat                  | (3) Pr        | rotein (4)          | Lactose      |
| 17.           | According to   | o PFA rules, toned mil   | k should hav  | ve a minimum of     |              |
|               | (1) 3.0% fa    | t and 8.0% SNF           | (2) 3         | 0% fat and 8.5%     | SNF          |
|               | (3) 3·5% fa    | t and 8-5% SNP           | (4) 3.        | 5% fat dist \$ 400  | Lets be      |
| L <b>59</b> ) | •              | •                        | 3             | ·                   |              |

| 18.   | According to BIS, ice cream must have         | the following minimum percentage of           |
|-------|---|---|
|       | (1) 8% (2) 10%                                | (3) 12% (4) 14%                               |
| 19.   | Sweet curdling of milk is due to produ        | ection of the enzyme                          |
|       | (1) lipase (2) rennin                         | (3) lactase (4) protease                      |
| 20.   | Following method is used for determin         | ation of fat in milk                          |
|       | (1) Soxhlet method                            | (2) Weende method                             |
|       | (3) Kjeldahl method                           | (4) Gerber method                             |
| 21.   | Which test is conducted to determine          | the efficiency of milk sterilization?         |
|       | (1) Turbidity test                            | (2) Alcohol precipitation test                |
|       | (3) Phosphatase test                          | (4) COB test                                  |
| 22.   | Following is a broad spectrum preserve        | ative   |
|       | (1) Calcium sorbate                           | (2) Calcium propionate                        |
|       | (3) Sodium benzoate                           | (4) Potassium metabisulfite                   |
| 23.   | Which of the following denotes accumulations? | ilation of solutes on surface of foods during |
|       | (1) Scalding (2) Thickening                   | (3) Wilting. (4) Case hardening               |
| 24.   | Microbial cells are most resistant to he      | at in   |
|       | (1) lag phase (2) log phase                   | (3) decline phase (4) stationary phase        |
| (159) |   |   |
|       | 4   |   |

| 25.           | β-gi | ucans are found    | l in          |                   |                 |                   |        |                     |
|---------------|------|--------------------|---------------|-------------------|-----------------|-------------------|--------|---------------------|
|               | (1)  | wheat              | (2)           | rice              | (3)             | barley            | (4)    | soyabean            |
| 26.           | Hop  | ps are used as     | a <b>s</b> oi | arce of the follo | wing            | in beer manufe    | acture | •                   |
|               | (1)  | Amylases           | (2)           | Tannins           | (3)             | Proteases         | (4)    | Carbohydrates       |
| 27.           | Ten  | apering of soft wi | heat          | is done to follow | ving le         | vel prior to mill | ing in | a roller flour mill |
|               | ·(1) | 12-13%             | (2)           | 14-15%            | (3)             | 16-17%            | (4)    | 18-19%              |
| <b>28</b> ;   | Wh   | ich of the follow  | ving          | is not an artifi  | cial sv         | weetener?         |        | ••                  |
|               | (1)  | Saccharin          |               |                   | (2)             | Calcium cycla     | mate   |                     |
|               | (3)  | Sorbitol           |               |                   | (4)             | Auramine          |        |                     |
| 29.           | Wh   | nich of the follow | ving          | is rich in meth   | nionine         | :?                |        |                     |
|               | (1)  | Groundnut          | (2)           | Cottonseed        | (3)             | Sesame            | (4)    | Soyabean            |
| 30.           | Wh   | nich of the follow | ving          | fraction of pro   | t <b>cins</b> i | s maximum in      | mille  | ed rice?            |
|               | (1)  | Albumin            | (2)           | Globulin          | (3)             | Glutelin          | (4)    | Prolamine           |
| 31.           | Paj  | pain is used in    | mea           | t as a            |                 |                   |        | ,                   |
|               | (1)  | flavour enhance    | ær            |                   | (2)             | tenderiser        |        |                     |
| . •           | (3)  | colouring agen     | t             |                   | (4)             | preservation      |        |                     |
| 15 <b>9</b> ) |      |                    |               |                   | 5               |                   |        |                     |

| 32.      | Which of the following | owing is a non-clima  | acteric | food?           |                        |
|----------|------------------------|-----------------------|---------|-----------------|------------------------|
|          | (1) Mango              | (2) Banana            | (3)     | Tomato          | (4) Pineapple          |
| 33.      | Which of the following | owing is an antioxid  | lant?   |                 |                        |
|          | (1) Sodium prop        | oionate.              | (2)     | Calcium sulpha  | ate                    |
|          | (3) Propyl gallat      | <b>e</b> .            | (4)     | Potassium nitra | ate                    |
| 34.      | Met-myoglobin iz       | nparts following colo | ur to n | neat            |                        |
|          | (1) Brown              | (2) Bright red        | (3)     | Greenish tinge  | (4) Purple             |
| 35.      | The temperature        | range for Ultra High  | п Тетр  | erature (UHT) s | terilization of milk i |
|          | (1) 90-100 °C          | (2) 100-115 °C        | (3)     | 135-150 °C      | (4) 180-210 °C         |
| 36.      | BOD stands for         |                       |         |                 | •                      |
|          | (1) Biological Ox      | sygen Depletion       | (2)     | Biological Oxyg | en Demand              |
|          | (3) Biochemical        | Oxygen Demand         | (4)     | British Oxygen  | Depletion              |
| 37.      | Process time is i      | ndependent of can s   | ize in  |                 |                        |
|          | (1) in-bottle pas      | teurization           | (2)     | canning         |                        |
|          | (3) bottling           |                       | (4)     | aseptic canning | <b>3</b> ,             |
| 38.      | Which of the following | owing is a flavour er | nhance  | r?              |                        |
|          | (1) Potassium br       | omate                 | (2)     | Monosodium gl   | utamate                |
|          | (3) Glycerol mon       | o stearate            | (4)     | Sodium alginate | e                      |
| /a.e.o.: |                        |                       |         |                 |                        |
| (159)    |                        |                       | 6       |                 |                        |

|             |   | •   |
|-------------|---|---|
| <b>39</b> . | A thermocouple used in temperature re   | gulators is made of two metals having different |
|             | (1) coefficient of thermal expansion    | (2) densities                                   |
|             | (3) weight                              | (4) malleability                                |
| <b>40</b> . | The chief muscle pigment is a protein   | called  |
|             | (1) globulin (2) myoglobin              | (3) elastin (4) collagen                        |
| 41.         | Microbial rennet is mainly prepared f   | rom   |
|             | (1) Aspergillus fumigates               | (2) Bacillus subtilis                           |
|             | (3) B. stearothermophilus               | (4) Aspergillus niger                           |
| 42.         | BHA is added into food products as      |   |
|             | (1) antibacterial agent                 | (2) antioxidant                                 |
|             | (3) antifoaming agent                   | (4) anticaking agent                            |
| 43.         | Frester burn, a defect which occurs     | generally in frozen foods is due to             |
|             | (1) osmosis                             | (2) rehydration                                 |
|             | (3) thermal conductivity                | (4) dehydration                                 |
| 44.         | Refrigerant changes from vapour to l    | iquid state in the following                    |
|             | (1) Compressor (2) Evaporator           | (3) Condenser (4) Metering device               |
| 45.         | For complete conduction of glucose, re- | spiratory quotient is                           |
| •           | (1) 0-7 (2) 1-0                         | (3) 1·3   |
| 1 50)       | •                                       | 7   |

| 46         | 46. Which of the following amino acids is deficient in pulses? |  |  |  |  |  |  |
|------------|--|--|--|--|--|--|--|
|            | (1) Lysine (2) Methionine                                      | (3) Tryptophan (4) Threonine                     |  |  |  |  |  |
| 47         | 7. Sulphur resistant cans are used for                         | canning of                                       |  |  |  |  |  |
|            | (1) peas (2) lettuce   | (3) apples (4) tomatoes                          |  |  |  |  |  |
| 48.        | Loss factor term is associated with                            | the following                                    |  |  |  |  |  |
|            | (1) Irradiation  | (2) Microwave heating                            |  |  |  |  |  |
|            | (3) Ohmic heating  | (4) Thermal processing                           |  |  |  |  |  |
| 49.        | . The micro-organisms associated with                          | pickling of vegetables are                       |  |  |  |  |  |
|            | (1) Acetobactor aceti  | (2) Lactic acid bacteria                         |  |  |  |  |  |
|            | (3) Saccharomyces cereviseae                                   | (4) Staphylococcus aureus                        |  |  |  |  |  |
| 50.        | Which of the following enzymes shown homogenization of milk?   | ald be inactivated prior to or immediately after |  |  |  |  |  |
|            | (1) Lipase (2) β-galactosida:                                  | se (3) Invertase (4) Protease                    |  |  |  |  |  |
| - 51.      | Which of the following organisms is t                          | used in tempeh production?                       |  |  |  |  |  |
|            | (1) Aspergillus niger  | (2) Neurospora sitophila                         |  |  |  |  |  |
|            | (3) Rhizopus oligosporus                                       | (4) Aspergillus oryzae                           |  |  |  |  |  |
| <b>52.</b> | Erucic acid is found in  | •  |  |  |  |  |  |
|            | (1) linseed oil (2) cottonseed oil                             | (3) soyabean oil (4) mustard oil                 |  |  |  |  |  |
| (159)      |  |  |  |  |  |  |  |

| 53.          | Thiobarbituric Acid Test is used to det   | termine                                  |
|--------------|---|--|
|              | (1) hydrolytic rancidity                  | (2) oxidative rancidity                  |
|              | (3) proteolysis                           | (4) -SH groups                           |
| <b>54.</b>   | The principal site of water absorption i  | in case of globular protein is           |
|              | (1) hydroxyl group                        | (2) peptide bond                         |
|              | (3) carboxylic group                      | (4) amino group                          |
| <b>5</b> 5.  | Multiple effect evaporator is used to     | •  |
|              | (1) save energy                           | (2) concentrate heat sensitive materials |
|              | (3) concentrate any food                  | (4) increase steam economy               |
| 56.          | Which of the following exhibits maximum   | um sweetness?                            |
|              | (1) Maltose (2) Sucrose                   | (3) Fructose (4) Glucose                 |
| 57.          | Praction of wheat protein soluble in 70   | 0% alcohol is called                     |
|              | (1) gluten (2) globulin                   | (3) glutenin (4) gliadin                 |
|              | Tringeries ages is associated with the    | ha fallamina                             |
| 5 <b>8</b> . | Winterization step is associated with the | ne lollowing                             |
|              | (1) Vegetable oils                        | (2) Animal protein                       |
|              | (3) Winter vegetables                     | (4) Freeze drying                        |
| <b>59.</b>   | Who is known as father of canning?        | •  |
|              | (Nic Louis Spaner                         | (2) N. W. Decrosier                      |
|              | (3) Richales Appert                       | (4) Peter Demand                         |

| 60.        | <b>A</b> 1 | basis box of tin    | plate  | has an area of   |      |                  |       |                |
|------------|------------|---------------------|--------|------------------|------|------------------|-------|----------------|
|            | (1)        | 11360 sq inch       |        |                  | (2)  | 21360 sq inch    |       |                |
|            | (3)        | 31360 sq inch       |        |                  | (4)  | 41360 sq inch    |       |                |
| 61.        | <b>A</b> : | solution having 2   | 25%    | sodium chloride  | will | correspond to    |       |                |
| •          | (1)        | 70° Salometer       | (2)    | 80° Salometer    | (3)  | 90° Salometer    | (4)   | 100° Salometer |
| 62.        | W          | nich of the follow  | ing    | is not a natural | colo | our?             |       |                |
|            | (1)        | Lycopene            | (2)    | Lutein ·         | (3)  | Xanthophyll      | (4)   | Erythrosine    |
| 63.        | Sa         | uerkraut is man     | ufac   | tured from       |      |                  |       |                |
|            | (1)        | cauliflower         | (2)    | cucumber         | (3)  | cabbage          | (4)   | grapes         |
| 64.        | Sy         | neresis of fruit jo | elly ( | occurs due to    |      |                  |       |                |
|            | (1)        | insufficient pec    | tin    |                  | (2)  | insufficient sug | ar    |                |
|            | (3)        | hydrolysis of su    | ıgar   |                  | (4)  | use of immatur   | re fr | uit .          |
| <b>65.</b> | Red        | d colour of apple   | s is   | due to           |      | -                |       |                |
|            | (1)        | Anthocyanins        | (2)    | Lycopene         | (3)  | Carotenes        | (4)   | Xanthophylls   |
| 66.        | Wh         | at is a mono-me     | eric 1 | unit of pectin?  |      | •                |       |                |
|            | (1)        | Glucose             |        |                  | (2)  | Galactose        |       |                |
|            | (3)        | Mannose             |        |                  | (4)  | Galacturonic ac  | cid   |                |
| (159)      |            |                     |        | 10               |      |                  |       |                |
|            |            |                     |        | 10               |      | ·                |       |                |

| 67.              | oxidase?            |                            |                       |                              |  |
|------------------|---------------------|----------------------------|-----------------------|------------------------------|--|
|                  | (1) Guiacol         |                            | (2) Tartaric acid     |                              |  |
|                  | (3) Chlorogenic a   | cid                        | (4) Ferulic acid      |                              |  |
| 68.              | Minimum content     | of juice in squash         | is                    |                              |  |
|                  | (1) 10 percent      | (2) 25 percent             | (3) 40 percent        | (4) 65 percent               |  |
| 6 <del>9</del> . | Rice bran is a go   | od source of the foll      | owing                 |                              |  |
|                  | (1) Vitamin A       | (2) Vitamin B <sub>2</sub> | (3) Vitamin D         | (4) Vitamiri B <sub>12</sub> |  |
| <b>70</b> .      | The pH of medium    | n acid foods is in th      | ne range of           |                              |  |
|                  | (1) above 5·3       | (2) 4.5–5.3                | (3) 3.7-4.5           | (4) below 3.7                |  |
| 71.              | Clostridium botulir | num does not grow i        | n foods having pH b   | oelow                        |  |
|                  | (1) 4-6             | (2) 5.0                    | (3) 5.6               | (4) 6.0                      |  |
| <b>72</b> .      | Which of the follo  | wing is an index or        | ganism for sanitary   | quality of a food?           |  |
|                  | (1) Lactic acid be  | acteria                    | (2) Shigella          |                              |  |
|                  | (3) Salmonella      |                            | (4) Coliforms         |                              |  |
| <b>73</b> .      | Time in minutes a   |                            | ture required to dest | roy 90% of organisms in s    |  |
| ,                | (3) P value         | (2) D value                | (3) Z value           | - (4) A                      |  |

11

| 74.            | Following is a Class I preservative  |  |  |  |  |
|----------------|--------------------------------------|--|--|--|--|
|                | (1) Sodium chloride                  | (2) Potassium meta bisulphate  |  |  |  |
|                | (3) Sodium meta bisulphate           | (4) Sodium benzoate  |  |  |  |
| 75.            | The approximate lower limit of wat   | er activity for growth of moulds is  |  |  |  |
|                | (1) 0.60 (2) 0.80                    | (3) 0.88 (4) 0.94  |  |  |  |
| 76.            | The minimum concentration of ton     | nato solids in tomato paste is   |  |  |  |
|                | (1) 12 percent (2) 25 percent        |  |  |  |  |
| 77.            | Jel meter is used for assessment of  | Marie de la companya |  |  |  |
|                | (1) viscosity of pectin extract      | (2) activity of jelly  |  |  |  |
|                | (3) colour of fruit juice            | (4) TSS of jelly   |  |  |  |
| 78.            | In jam, the total soluble solids sho | ould not be less than  |  |  |  |
|                |                                      | nt (3) 76·5 percent (4) 80·5 percen  |  |  |  |
| 79.            | Water absorption of wheat flour is   | measured by  |  |  |  |
|                | (1) Viscograph (2) Extesograp        | ·  |  |  |  |
| 80.            | Pasta products are usually made fi   | om the following type of wheat   |  |  |  |
|                |                                      | (3) red wheat (4) durum when   |  |  |  |
| 81.            |                                      | ed polysaccharide present in most cereals  |  |  |  |
|                | (1) Amylase (2) Amylopectin          |  |  |  |  |
| /1 <b>-</b> 01 | (-) anytopeen                        | n (3) Cellulose (4) Glycogen   |  |  |  |
| (159)          |                                      | 12   |  |  |  |

| <b>8</b> 2.   | The ratio of gluteni | n and gliadin in goo  | od qu   | ality wheat pro         | tein is           |
|---------------|----------------------|-----------------------|---------|-------------------------|-------------------|
|               | (1) 1:1              | (2) 2:1               | (3)     | 1:2                     | (4) 1:3           |
| <b>8</b> 3.   | Which of the follow  | ing is not a unit of  | rolle   | r flour mill?           |                   |
|               | (1) Break roll syste | em.                   | (2)     | Reduction roll          | system            |
|               | (3) Cone polisher    |                       | (4)     | Purifier                | •                 |
| 84.           | Wheat kernel has t   | oran content of       |         | . , `                   |                   |
|               | (1) 9-11 percent     | (2) 13-17 percent     | (3)     | 18-21 percent           | (4) 22-25 percent |
| <b>85.</b>    | For avoiding develo  | pment of cracks page  | idy :   | should be harve         | sted at           |
|               | (1) 10-12% moistu    | re .                  | (2)     | 12-14% moistu           | ıre               |
|               | (3) 20-22% moistu    | re .                  | (4)     | 30-32% moistu           | ire               |
| <b>\$</b> 6.  | Which of the follow  | ing is a chemical le  | aven    | ing agent?              | •                 |
| •             | (1) Ammonium bic     | arbonate              | (2)     | Acid calcium p          | hosphate          |
|               | (3). Sodium citrate  |                       | (4)     | GMS                     |                   |
| <b>87</b> .   | Which of the follow  | ring causes ropiness  | in t    | read?                   |                   |
|               | (1) Bacillus cereus  |                       | (2)     | Bacillus subtilis       | s                 |
|               | (3) Bacillus ceagule | uns                   | (4)     | Bacillus circula        | ns                |
| <b>86</b> .   | Normally the % ex    | traction rate of when | at filo | ur for <b>brea</b> d ma | lking is          |
| •             |                      | (2) 60-62             | (3)     | 70-72                   |                   |
| L <b>59</b> ) |                      | . 13                  | 3       | •                       |                   |

| <b>89</b> . | Baking of double br   | ead is done at      |      |                   |     |                       |
|-------------|---|---------------------|------|-------------------|-----|-----------------------|
|             | (1) 130-150 °F  | (2) 230-250 °F      | (3)  | 330-350 °F        | (4) | 430-450 °F            |
| 90.         | Following solvent is  | used for extraction | n of | oil from oilseeds |     |                       |
|             | (1) Ethyl alcohol   | (2) Hexane          | (3)  | Acetone           | (4) | Benzene               |
| 91.         | Calcium propionate  | is a                |      |                   |     |                       |
|             | (1) mould inhibitor   |                     | (2)  | emulsifier        |     |                       |
|             | (3) leavening agent   |                     | (4)  | bleaching agen    | t   |                       |
| 92.         | Gossypol is found in  | 1                   |      |                   |     |                       |
|             | (1) sesame  | (2) mustard         | (3)  | groundnut         | (4) | cottonseed            |
| 93.         | Following is a crysta   | ıl clear product    |      |                   |     |                       |
|             | (1) Crush   | (2) Cordial         | (3)  | Jelly             | (4) | Nectar                |
| 94.         | It is not utilized by   | yeasts              |      |                   |     |                       |
|             | (1) sucrose   | (2) lactose         | (3)  | glucose           | (4) | fructose              |
| 95.         | Which of the following temperature?   | ng value is added   | to ( | convert temperat  | ure | in °C into absolut    |
|             | (1) 273-15  | 2) 373·15           | (3)  | 300-15            | (4) | 325-15                |
| 96.         | If the pressure is reduced below atmospheric pressure, the boiling point of milk will b |                     |      |                   |     | point of milk will be |
|             | (1) greater than 100  |                     |      | less than 100 °   |     |                       |
|             | (3) 100 °C  |                     | (4)  | 101 °C            |     |                       |
| (159)       |   | 14                  |      |                   |     |                       |

| 97.   | The         | perfect gas low    | state        | s that           |                |                       |                     |
|-------|-------------|--------------------|--------------|------------------|----------------|-----------------------|---------------------|
|       | (1)         | PT = NvR           | (2) F        | R = TNv          | (3)            | PV = NRT              | (4) PN = vRT        |
| 98.   | Wha         | at is Gluten?      |              |                  |                |                       |                     |
|       | (1).        | Carbohydrate       |              | •                | (2)            | Protein,              |                     |
|       | (3)         | Vitamin            |              |                  | (4)            | Mixture of carbo      | hydrate and protein |
| 99.   | The         | unit of thorma     | l cend       | lactivity is     |                | •                     | ••                  |
|       | <b>(11)</b> | W/m-K              | (2)          | W/m²-K           | (3)            | W/m <sup>2</sup> -K-h | (4) W-m/K           |
| 100.  | The         | : Parrall index is | usc          | i to determine   | the            | degree of             |                     |
|       | (1)         | centrifugation     |              |                  | (2)            | homogenization        |                     |
|       | (3)         | sterilization      |              |                  | <del>(4)</del> | irradiation           |                     |
| 101.  | The         | e second stage i   | n two        | stage homoge     | niza           | tion is used to       |                     |
|       | (1)         | reduce the size    | of fa        | t globules furt  | her            |                       |                     |
|       | •           | increase the si    |              |                  |                |                       |                     |
|       |             | increase the si    |              |                  |                | ulos                  | •                   |
|       | (4)         | uniformly disp     | erse t       | he fat globules  | 1              |                       |                     |
| 102.  | For         | r good quality ic  | e cre        | am, the overru   | n at           | -5.6 °C should        | be                  |
|       | (1)         | 50%                | (2)          | 100%             | (3)            | 150%                  | (4) 75%             |
| 103.  | مړ          | Chi maintaige com  | stent o      | n dry basis is c | qual           | to a malahare con     | 0                   |
|       | (1)         | 28%                | <b>''(2)</b> | 50%              | (3             | 75%                   |                     |
| (159) |             |                    |              | 1                | 5              |                       |                     |

| 104.         | Cyclone separator is used to separate the materials by the application of |  |  |  |  |
|--------------|---|--|--|--|--|
|              | (1) centripetal force   | (2) gravitational force                      |  |  |  |
|              | (3) magnetic force  | (4) centrifugal force                        |  |  |  |
| 105.         | Recommended moisture content (wet 1                                       | basis) of paddy for safe storage is          |  |  |  |
|              | (1) less than 5% (2) 6-8%   | (3) 12-13% (4) 18-20%                        |  |  |  |
| 106.         | Steam economy of single effect evapor                                     | ator without vapour compression is           |  |  |  |
|              | (1) less than one (2) equal to one  | (3) equal to two (4) equal to three          |  |  |  |
| 107.         | In constant rare drying period, the a<br>temperature of drying air?       | surface of the food material equals to which |  |  |  |
| . •          | (1) Dry bulb temperature  |  |  |  |  |
|              | (2) Wet bulb temperature  | •  |  |  |  |
|              | (3) Dew-point temperature   |  |  |  |  |
|              | (4) Lower temperature than wet bulb                                       | temperature                                  |  |  |  |
|              |   |  |  |  |  |
| 108.         | Triple point of water occurs at   |  |  |  |  |
|              | (1) 30 °F and 2.7 mm Hg   | (2) 30 °F and 3.7 mm Hg                      |  |  |  |
|              | (3) 32 °F and 4.7 mm Hg   | (4) 32 °F and 5.7 mm Hg                      |  |  |  |
| 109.         | Which of the following is the major co                                    | mponent of glass?                            |  |  |  |
|              | (1) Calcium oxide   | (2) Potassium oxide                          |  |  |  |
|              | (3) Sodium oxide  | (4) Silica oxide                             |  |  |  |
| <b>159</b> ) | 16  | ;  |  |  |  |

| 110.   | A ton of refrigeration | on is equal to          | •                        |                           |
|--------|------------------------|-------------------------|--------------------------|---------------------------|
|        | (1) 100000 BTU         |                         | (3) 200000 BTU           | (4) · 288000 BTU          |
| 111.   | For strongly corrosi   | ve foods, following typ | oe of steel plate is rec | commended for canning     |
|        | (1) Type L             | (2) Type MS             | (3) Type MR              | (4) Type MC               |
| 112.   | Non-enzymatic bro      | wning reaction occur    | s between                |                           |
|        | (1) sugars and as      | corbic acid             | (2) amino acids a        | and sugars                |
| •      | (3) amino acids a      | nd ascorbic acid        | (4) polyphenels a        | nd oxygen                 |
| 113.   | What concentration     | n of benzoates is gener | rally used in preserv    | ation of tomato products? |
|        | (1) 0.1%               | (2) 0.3%                | (3) 0.5%                 | (4) 0·7%                  |
| 114.   | Homogenized milk       | must have 90% of f      | at globules of size      | smaller than              |
|        | (1) 1 μ                | (2) 2 µ                 | (3) 3 μ                  | (4) 4 μ                   |
| 115.   | Under the most id      | leal conditions a bac   | terium may reprodu       | ace itself as often as    |
|        | (1) every 20 to 30     | ) seconds               | (2) every 20 to 3        | 0 minutes                 |
|        | (3) every 40 to 50     | ) seconds               | (4) every 40 to 5        | 0 minutes                 |
| 116.   | Best set jelly is of   | btained at a pH of      |                          |                           |
|        | (1) 3.0                | (2) 6.0                 | (3) 7.0                  | (4) 8.0                   |
| 117.   | Which is the mos       | t essential constituer  |                          | والأواجه والماسي          |
|        | (1). Starch            | (2) Cellulose           | (3) Pectin               | (4) Hellatodanique        |
| (A.89) | D/4( <b>IS9</b> )      | . 1                     | 7                        | <b></b>                   |

| 1 | 10  | EDO | -4     | £   |
|---|-----|-----|--------|-----|
| 1 | 18. | rro | stands | IOT |

- (1) Food Products Organization
- (2) Fruit Products Order
- (3) Food Products Order
- (4) Fruit Panel Organization

## 119. Beany flavour in soyabean is associated with

- (1) lipoxygenase oxidase
- (2) polyphenol

(3) protease

(4) pectin methyl esterase

## 120. Cereals are generally deficient in

- (1) lysine
- (2) methionine
- (3) isoleucine (4) tryptophan

# अभ्यर्थियों के लिए निर्देश

(इस पुस्तिका के प्रथम आवरण-पृष्ठ पर तथा उत्तर-पत्र के दोनों पृष्ठों पर केवल नीली या काली बाल-प्वाइंट पेन से ही लिखें)

- 1. प्रश्न पुस्तिका मिलने के 10 मिनट के अन्दर ही देख लें कि प्रश्नपत्र में सभी पृष्ठ मौजूद हैं और कोई प्रश्न छूटा नहीं है। पुस्तिका दोषयुक्त पाये जाने पर इसकी सूचना तत्काल कक्ष-निरीक्षक को देकर सम्पूर्ण प्रश्नपत्र की दूसरी पुस्तिका प्राप्त कर लें।
- 2. परीक्षा भवन में लिफाफा रहित प्रवेश-पत्र के अतिरिक्त, लिखा या सादा कोई भी खुला कागज साथ में न लायें।
- उत्तर-पत्र अलग से दिया गया है। इसे न तो मोड़ें और न ही विकृत करें। दूसरा उत्तर-पत्र नहीं दिया जायेगा, केवल उत्तर-पत्र का ही मूल्यांकन किया जायेगा।
- 4. अपना अनुक्रमांक तथा उत्तर-पत्र का क्रमांक प्रथम आवरण-पृष्ठ पर पेन से निर्धारित स्थान पर लिखें।
- 5. उत्तर-पत्र के प्रथम पृष्ठ पर पेन से अपना अनुक्रमांक निर्धारित स्थान पर लिखें तथा नीचे दिये वृत्तों को गाढ़ा कर दें। जहाँ-जहाँ आवश्यक हो वहाँ प्रश्न-पुस्तिका का क्रमांक तथा सेट का नम्बर उचित स्थानों पर लिखें।
- 6. ओ॰ एम॰ आर॰ पत्र पर अनुक्रमांक संख्या, प्रश्न-पुस्तिका संख्या व सेट संख्या (यदि कोई हो) तथा प्रश्न-पुस्तिका पर अनुक्रमांक सं॰ और ओ॰ एम॰ आर॰ पत्र सं॰ की प्रविष्टियों में उपरिलेखन की अनुमति नहीं है।
- 7. उपर्युक्त प्रविष्टियों में कोई भी परिवर्तन कक्ष निरीक्षक द्वारा प्रमाणित होना चाहिये अन्यथा यह एक अनुचित साधन का प्रयोग माना जायेगा।
- 8. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं। प्रत्येक प्रश्न के वैकल्पिक उत्तर के लिये आपको उत्तर-पत्र की सम्बन्धित पंक्ति के सामने दिये गये वृत्त को उत्तर-पत्र के प्रथम पृष्ठ पर दिये गये निर्देशों के अनुसार पेन से गाढ़ा करना है।
- 9. प्रत्येक प्रश्न के उत्तर के लिये केवल एक ही वृत्त को गाढ़ा करें। एक से अधिक वृत्तों को गाढ़ा करने पर अथवा एक वृत्त को अपूर्ण भरने पर वह उत्तर गलत माना जायेगा।
- 10. ध्यान दें कि एक बार स्याही द्वारा अंकित उत्तर बदला नहीं जा सकता है। यदि आप किसी प्रश्न का उत्तर नहीं देना चाहते हैं, तो सम्बन्धित पंक्ति के सामने दिये गये सभी वृत्तों को खाली छोड़ दें। ऐसे प्रश्नों पर शून्य अंक दिये जायेंगे।
- 11. रफ़ कार्य के लिये प्रश्न-पुस्तिका के मुखपृष्ठ के अन्दर वाले पृष्ठ तथा अंतिम पृष्ठ का प्रयोग करें।
- परीक्षा के उपरान्त केवल ओ०एम०आर० उत्तर-पत्र परीक्षा भवन में जमा कर दें।
- 13. परीक्षा समाप्त होने से पहले परीक्षा भवन से बाहर जाने की अनुमित नहीं होगी।
- 14. यदि कोई अभ्यर्थी परीक्षा में अनुचित साधनों का प्रयोग करता है, तो वह विश्वविद्यालय द्वारा निर्धारित दंड का/की, भागी होगा/होगी।