

CII – iPATE 2.0 (2021)

Computer Based PAN India Examination

Category: GRADUATE ENGINEER (ENTRY LEVEL)

Engineering Discipline: FOOD TECHNOLOGY

Questions & Answers

(Reviewed, Revised & Published dtd. 26.11.2021)

Paper Structure

| Question Nos. | Sections & Topics | | Marks |
|---------------|--|---|------------|
| 1 to 20 | Section I : Cognitive Abilities | <ul style="list-style-type: none">Quantitative AptitudeAnalytical ReasoningData InterpretationEnglish Communication | 20 |
| 21 to 40 | Section II : Professional Abilities | <ul style="list-style-type: none">Project ManagementHealth, Safety & Risk ManagementEnvironmental LawsSocial Responsibility & EthicsFinance & AccountsLegal, Contracts & Arbitration | 20 |
| 41 to 50 | Section III (A) : Technical Abilities | Physics & Chemistry (10+2 level) | 10 |
| 51 to 100 | Section III (B) : Technical Abilities | Engineering Discipline | 50 |
| TOTAL | | | 100 |

NOTE:

- Exam Duration: 3 Hours
- Total 100 no. of Questions of 1 Mark each with Negative Marking of ½ Mark for every wrong answer
- Questions (Section wise) and respective Answer Options shuffled at Candidates' terminal

| | | | | |
|----------------|---|----|----|----|
| Question No. 1 | Discriminant of a second-degree polynomial with integer coefficients cannot be: | | | |
| Answer Options | A) | B) | C) | D) |
| | 43 | 33 | 68 | 25 |
| Right Answer | A | | | |

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|----------------|--|-----|-----|-----|
| Question No. 2 | How many subsets A of {1, 2, 3, 4, 5, 6, 7, 8, 9, and 10} have the property that no two elements of A sum to 11? | | | |
| Answer Options | A) | B) | C) | D) |
| | 1024 | 512 | 343 | 243 |
| Right Answer | C | | | |

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|----------------|---|---------------|------------|-----------|
| Question No. 3 | Viru and Aarti started a car journey from Chandigarh to Delhi, which are 288 km apart. Viru took 12 hours more than Aarti to complete the journey. Had Viru travelled at double his actual speed, he would have taken 4 hours less than Aarti to complete the journey. Find the respective speeds (in km/hr) at which Viru and Aarti travelled. | | | |
| Answer Options | A) | B) | C) | D) |
| | 14.4 and 9 | 14.5 and 28.5 | 9 and 14.4 | 15 and 20 |
| Right Answer | C | | | |

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|----------------|--|--------------------|-------------------|---------------|
| Question No. 4 | The height of a trapezoid whose diagonals are mutually perpendicular is equal to 4. Find the area of the trapezoid if it is known that the length of one of its diagonals is equal to 5. | | | |
| Answer Options | A) | B) | C) | D) |
| | 50/3 square units | 100/3 square units | 16/6 square units | None of these |
| Right Answer | A | | | |

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|----------------|---|-------|-------|-------|
| Question No. 5 | A polyhedron has faces that are all either triangles or squares. No two square-faces share an edge, and no two triangular-faces share an edge. What is the ratio of triangular-faces to the number of square-faces? | | | |
| Answer Options | A) | B) | C) | D) |
| | 03:04 | 04:03 | 01:02 | 04:05 |
| Right Answer | B | | | |

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|----------------|---|--|-------------------------------------|--------------|
| Question No. 6 | Your mind likes reading and it actually has a number of important health affects you can't get in any other way. Reading gives you a unique "pause button" for comprehension. Typically, when you read, you have more time to think. When you watch a film or listen to a tape, you don't press that pause button. Reading requires a great deal of concentration, which calls your intelligence to action. The author of this passage would agree that: | | | |
| Answer Options | A) | B) | C) | D) |
| | Reading is a good way to relax, since it doesn't require that much thinking. | Watching a movie has the same effect on the intelligence as reading. | Reading develops your intelligence. | Both A and C |
| Right Answer | C | | | |

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|----------------|--|------|-------|-------|
| Question No. 7 | Read the following information carefully and answer the question given below. P stands 5m west of R. T stands 5m south of Q. T stands 6m east of U. V stands 2m west of Q. A stands 2m south of U. V stands 3m north of R. If G stands 7m east of P, then in which direction does G stands with respect to T? | | | |
| Answer Options | A) | B) | C) | D) |
| | West | East | South | North |
| Right Answer | D | | | |

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|----------------|--|--|--|---|
| Question No. 8 | The French Revolution began in 1789 and ended in the late 1790s with the ascent of Napoleon Bonaparte. During this period, French citizens razed and redesigned their country's political landscape, uprooting centuries-old institutions such as absolute monarchy and the feudal system. Like the American Revolution before it, the French Revolution was influenced by Enlightenment ideals, particularly the concepts of popular sovereignty and inalienable rights. From this passage it can be concluded that: | | | |
| Answer Options | A) | B) | C) | D) |
| | The French revolution began before the Russian Revolution. | In the French Revolution their monarch was killed. | The American Revolution happened before the French Revolution. | Napoleon initiated the French Revolution. |
| Right Answer | C | | | |

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|----------------|---|-----------------|-----------------|-----------------|
| Question No. 9 | A, B, C, D and E are sitting on a bench. A is sitting next to B, C is sitting next to D, D is not sitting with E who is on the left end of the bench. C is on the second position from the right. A is to the right of B and E. A and C are sitting together. In which position A is sitting? | | | |
| Answer Options | A) | B) | C) | D) |
| | Between B and C | Between E and D | Between B and D | Between C and E |
| Right Answer | A | | | |

| | | | | |
|-----------------|--|----|----|----|
| Question No. 10 | A, P, R, X, S and Z are sitting in a row. S and Z are in the centre. A and P are at the ends. R is sitting to the left of A. Who is to the right of P? | | | |
| Answer Options | A) | B) | C) | D) |
| | X | Z | S | A |
| Right Answer | A | | | |

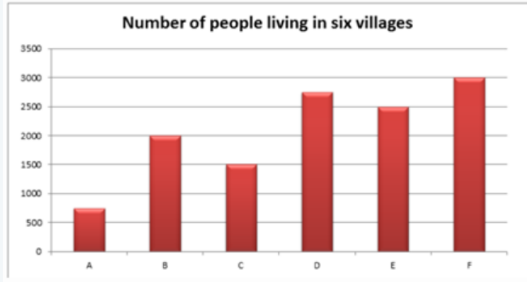
| | | | | |
|-----------------|---|----------|---------|---------|
| Question No. 11 | In the following question choose the word which is the exact OPPOSITE of the given word. STRINGENT | | | |
| Answer Options | A) | B) | C) | D) |
| | Magnanimous | Vehement | General | Lenient |
| Right Answer | D | | | |

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|-----------------|--|-----------------------------|-----------------------|--|
| Question No. 12 | Some proverbs/idioms are given below together with their meanings. Choose the correct meaning of proverb/idiom. To catch a tartar | | | |
| Answer Options | A) | B) | C) | D) |
| | To trap wanted criminal with great difficulty | To catch a dangerous person | To meet with disaster | To deal with a person who is more than one's match |
| Right Answer | D | | | |

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|-----------------|--|--------------|-------------|--------------|
| Question No. 13 | Which of the phrases A), B), C) and D) given below each sentence should replace the word/phrase printed in bold in the sentence to make it grammatically correct? If the sentence is correct as it is given and no correction is required, mark (E) as the answer. Since the girl did not want to be disturbed while studying, she left the phone off hooks. | | | |
| Answer Options | A) | B) | C) | D) |
| | of hook | for the hook | off hooking | off the hook |
| Right Answer | D | | | |

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|-----------------|--|---------|-----------|--------|
| Question No. 14 | In the following question choose the word which is the exact OPPOSITE of the given word. FICKLE | | | |
| Answer Options | A) | B) | C) | D) |
| | Courageous | Sincere | Steadfast | Humble |
| Right Answer | C | | | |

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|-----------------|--|------|------|------|
| Question No. 15 | <p>In question below, the passage consists of six sentences. The first and sixth sentence are given in the correct places. The middle four sentences in each have been removed and jumbled up. These are labelled as P, Q, R and S. Find out the proper order for the four sentences.</p> <p>S1: In the middle of one side of the square sits the Chairman of the committee, the most important person in the room.</p> <p>P: For a committee is not just a mere collection of individuals.</p> <p>Q: On him rests much of the responsibility for the success or failure of the committee.</p> <p>R: While this is happening, we have an opportunity to get the 'feel' of this committee.</p> <p>S: As the meeting opens, he runs briskly through a number of formalities.</p> <p>S6: From the moment its members meet, it begins to have a sort nebulous life of its own.</p> <p>The Proper sequence should be:</p> | | | |
| Answer Options | A) | B) | C) | D) |
| | RSQP | QSRP | SQPR | PQRS |
| Right Answer | B | | | |

| Question No. 16 | <p>Question nos. 16 to 20: Following bar chart represents the number of people in 6 different villages (A, B, C, D, E and F) and the tabular column depicts the ratio of literate to illiterate people and percentage of male living in those villages.</p>  <table border="1"> <thead> <tr> <th>Villages</th> <th>Literate : Illiterate</th> <th>% of male</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2 : 3</td> <td>52</td> </tr> <tr> <td>B</td> <td>11 : 9</td> <td>65</td> </tr> <tr> <td>C</td> <td>13 : 2</td> <td>45</td> </tr> <tr> <td>D</td> <td>4 : 1</td> <td>70</td> </tr> <tr> <td>E</td> <td>1 : 3</td> <td>39</td> </tr> <tr> <td>F</td> <td>11 : 19</td> <td>75</td> </tr> </tbody> </table> <p>If 40% of the female from village B is literate, then what is the percentage of male, who is illiterate from village B?</p> | | | | Villages | Literate : Illiterate | % of male | A | 2 : 3 | 52 | B | 11 : 9 | 65 | C | 13 : 2 | 45 | D | 4 : 1 | 70 | E | 1 : 3 | 39 | F | 11 : 19 | 75 |
|-----------------|--|-----------|-----------|----------------------------|----------|-----------------------|-----------|---|-------|----|---|--------|----|---|--------|----|---|-------|----|---|-------|----|---|---------|----|
| Villages | Literate : Illiterate | % of male | | | | | | | | | | | | | | | | | | | | | | | |
| A | 2 : 3 | 52 | | | | | | | | | | | | | | | | | | | | | | | |
| B | 11 : 9 | 65 | | | | | | | | | | | | | | | | | | | | | | | |
| C | 13 : 2 | 45 | | | | | | | | | | | | | | | | | | | | | | | |
| D | 4 : 1 | 70 | | | | | | | | | | | | | | | | | | | | | | | |
| E | 1 : 3 | 39 | | | | | | | | | | | | | | | | | | | | | | | |
| F | 11 : 19 | 75 | | | | | | | | | | | | | | | | | | | | | | | |
| Answer Options | A) 38% | B) 35% | C) 37% | D) cannot be determined | | | | | | | | | | | | | | | | | | | | | |
| Right Answer | C | | | | | | | | | | | | | | | | | | | | | | | | |

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|-----------------|---|-----------|-----------|----------------------------|
| Question No. 17 | What is the percentage of literate people in all the six villages together? | | | |
| Answer Options | A) 55% | B) 53% | C) 51% | D) cannot be determined |
| Right Answer | B | | | |

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|-----------------|--|---------------|---------------|---------------|
| Question No. 18 | What is the ratio between numbers of illiterate people from villages B, C & D to number of females from villages A, E & F? | | | |
| Answer Options | A) 320:527 | B) 527:330 | C) 330:527 | D) 527:320 |
| Right Answer | C | | | |

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|-----------------|--|------------|------------|----------------------------|
| Question No. 19 | If 3% of female from village D & 5% of female from village E are literate then what is the total number of literate males from D & F together? | | | |
| Answer Options | A) 1823 | B) 1723 | C) 1623 | D) cannot be determined |
| Right Answer | D | | | |

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|-----------------|---|--------------|--------------|--------------|
| Question No. 20 | The number of females from villages A & C is how much percentage more or less than number of females from villages D & F? | | | |
| Answer Options | A) 25.72% | B) 25.76% | C) 24.76% | D) 24.72% |
| Right Answer | C | | | |

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|-----------------|---|---------------------|-------------------|------------------|
| Question No. 21 | A project plan results in a project schedule seems to be too long. If the project network diagram cannot change but extra personnel resources is available, what is the best thing to do? | | | |
| Answer Options | A) | B) | C) | D) |
| | Fast track the project | Level the resources | Crash the project | Any other option |
| Right Answer | C | | | |

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|-----------------|---|---|---|-------------------------------------|
| Question No. 22 | Which of the following is not Project Management's goal | | | |
| Answer Options | A) | B) | C) | D) |
| | Keeping overall cost within the budget | Delivering the project/goods to the client at agreed time | Maintaining a satisfactory and well-functioning development | Avoiding customer/client complaints |
| Right Answer | D | | | |

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|-----------------|---|--------------------|-----------------|-----------------|
| Question No. 23 | You have recently been named as Project Manager of a new project under a Contract. The Project Management Unit (PMU) gave you the contract signed by the Customer and a Statement of Work and asked you to go on with initiation. Which document should you develop next? | | | |
| Answer Options | A) | B) | C) | D) |
| | Project Manager Plan | Milestone Schedule | Project Charter | Scope Statement |
| Right Answer | C | | | |

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|-----------------|---|------------------|-----------------|------------|
| Question No. 24 | The analysis tool for a quality problem that involves selecting the problem, identifying major categories of potential causes and associating likely specific causes is | | | |
| Answer Options | A) | B) | C) | D) |
| | Pareto chart | Fishbone diagram | Scatter diagram | Check list |
| Right Answer | B | | | |

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|-----------------|---|--------|--------|-------|
| Question No. 25 | The Occupational Safety & Health Administration requires employers to have Hearing Conservation Plans if the average 8-hour noise exposure is more than | | | |
| Answer Options | A) | B) | C) | D) |
| | 1000 dB | 500 dB | 105 dB | 85 dB |
| Right Answer | D | | | |

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|-----------------|--|--------|---------|----------|
| Question No. 26 | Ammonia becomes an immediate danger to your life and health when it is present at the following level or greater | | | |
| Answer Options | A) | B) | C) | D) |
| | 10 ppm | 30 ppm | 300 ppm | 1000 ppm |
| Right Answer | C | | | |

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|-----------------|--|---------------------------|-----------------|------------------|
| Question No. 27 | Exposure to high levels of noise can lead to which of the following: | | | |
| Answer Options | A) | B) | C) | D) |
| | High blood pressure | Gastrointestinal problems | Chronic fatigue | All of the above |
| Right Answer | D | | | |

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|-----------------|---|--------------------------------|----------------------------|--|
| Question No. 28 | Which type of fire extinguishing system is most commonly used to protect areas containing valuable equipment such as data processing rooms, telecommunications switches, and process control rooms? | | | |
| Answer Options | A) | B) | C) | D) |
| | Fixed extinguishing systems | Portable extinguishing systems | Hose extinguishing systems | It's up to the discretion the employer |
| Right Answer | A | | | |

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|-----------------|--|--|--|------------------|
| Question No. 29 | If you need to wear glasses with your eye or face protection, which of the following options is acceptable | | | |
| Answer Options | A) | B) | C) | D) |
| | Wearing prescription spectacles with side shields and protective lenses that meet safety requirements and also correct your vision | Wearing goggles that fit comfortably over your glasses | Wearing goggles that have corrective lenses mounted behind the protective lenses | All of the above |
| Right Answer | D | | | |

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|-----------------|--|------------|------------|-----------|
| Question No. 30 | Under which Section of Environment Pollution Act, the CPCB can issue the directions directly to industries | | | |
| Answer Options | A) | B) | C) | D) |
| | Section 16 | Section 18 | Section 11 | Section 5 |
| Right Answer | D | | | |

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|-----------------|--|----------|-----------|-----------|
| Question No. 31 | Which of these divisions of Pollution Control Implementation deals with Air Polluting Industries | | | |
| Answer Options | A) | B) | C) | D) |
| | PCI - I | PCI - II | PCI - III | SSI & Law |
| Right Answer | B | | | |

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|-----------------|--|------|------|------|
| Question No. 32 | The Kyoto Protocol is an international treaty which extends the United Nations Framework Convention on Climate Change (UNFCCC). In which year the convention held? | | | |
| Answer Options | A) | B) | C) | D) |
| | 1987 | 1995 | 1992 | 1997 |
| Right Answer | C | | | |

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|-----------------|--|--|--|---|
| Question No. 33 | What is the harm from manipulation of Earth's Ozone layer? | | | |
| Answer Options | A) | B) | C) | D) |
| | The average temperature of Earth's surface will increase gradually | The Oxygen content of the atmosphere will decrease | Increased amount of Ultraviolet radiation will reach earth's surface | Sea level will rise as the polar ice caps will gradually melt |
| Right Answer | C | | | |

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|-----------------|--|---------------------------|------------------------------|-----------------------------------|
| Question No. 34 | Which of the following would not represent the cash outflows for the business? | | | |
| Answer Options | A) | B) | C) | D) |
| | Purchase of building for cash | The sale of land for cash | Retirement of long-term debt | The payment of cash for dividends |
| Right Answer | B | | | |

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|-----------------|---|-----------|------|-----------|
| Question No. 35 | Which one of the following tangible fixed assets would not normally be depreciated? | | | |
| Answer Options | A) | B) | C) | D) |
| | Buildings | Machinery | Land | Equipment |
| Right Answer | C | | | |

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|-----------------|---------------------------|----------------------------|----------------------------------|----------------------------|
| Question No. 36 | A Profit is earned if? | | | |
| Answer Options | A) | B) | C) | D) |
| | Assets exceed Expenditure | Income exceeds Expenditure | Cash Inflow exceeds Cash Outflow | Income exceeds Liabilities |
| Right Answer | B | | | |

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|-----------------|--|--------------|------------------------------|------------------------|
| Question No. 37 | Which of the following budgets is normally prepared first? | | | |
| Answer Options | A) | B) | C) | D) |
| | Cash budget | Sales budget | Merchandise purchases budget | Selling expense budget |
| Right Answer | B | | | |

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|-----------------|--|--|--|--|
| Question No. 38 | What is the correct sequence in the formation of a contract? | | | |
| Answer Options | A) | B) | C) | D) |
| | Offer, acceptance, agreement, consideration. | Agreement, consideration, offer, acceptance. | Offer, agreement, consideration, acceptance. | Offer, acceptance, consideration, agreement. |
| Right Answer | D | | | |

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|-----------------|--|---|---|---|
| Question No. 39 | Which of the following answers is most accurate description of arbitration? | | | |
| Answer Options | A) | B) | C) | D) |
| | An informal meeting between the parties involving a discussion to sort out the dispute | An adjudicative process where the parties submit their disputes for a binding decision to an impartial tribunal | A meeting between the parties where an impartial third party gives decision | An impartial umpire selected to decide after hearing the dispute from parties |
| Right Answer | B | | | |

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|-----------------|---|-------------------|--------------|-----------|
| Question No. 40 | Which of the following answers is not type of alternative dispute resolution? | | | |
| Answer Options | A) | B) | C) | D) |
| | Arbitration | Court proceedings | Conciliation | Mediation |
| Right Answer | B | | | |

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|-----------------|---|------------------------------|----------------------------|-------------------------------|
| Question No. 41 | The equation of state for n moles of an ideal gas is $PV = nRT$, where R is the universal gas constant and all other quantities have their usual meanings. What are the dimensions of R? | | | |
| Answer Options | A) | B) | C) | D) |
| | $M^0L^{-2}K^{-1}mol^{-1}$ | $M^0L^2T^{-2}K^{-1}mol^{-1}$ | $ML^2T^{-2}K^{-1}mol^{-1}$ | $ML^{-2}T^{-2}K^{-1}mol^{-1}$ |
| Right Answer | C | | | |

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|-----------------|---|------|------|-----|
| Question No. 42 | A cylindrical tube open at both ends has fundamental frequency n. If one of the ends is closed, the fundamental frequency will become | | | |
| Answer Options | A) | B) | C) | D) |
| | $n/2$ | $2n$ | $4n$ | n |
| Right Answer | A | | | |

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|-----------------|--|-----|--------------|--------------|
| Question No. 43 | The speed of sound in a gas is V and the root mean square speed of the gas molecules is V_{rms} . If the ratio of the specific heats of the gas is 1.5, then the ratio of V: V_{rms} will be | | | |
| Answer Options | A) | B) | C) | D) |
| | 1:2 | 1:3 | $1:\sqrt{2}$ | $1:\sqrt{3}$ |
| Right Answer | C | | | |

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|-----------------|---|-----------|-------------|--------------|
| Question No. 44 | Which of the following phenomena gives evidence of the molecular structure of the matter? | | | |
| Answer Options | A) | B) | C) | D) |
| | Brownian motion | Diffusion | Evaporation | All of these |
| Right Answer | D | | | |

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|-----------------|--|-------------------|-------------------|-------------------|
| Question No. 45 | Starting with the same initial conditions, an ideal gas expands from volume V_1 to V_2 in three different ways. The work done by the gas is W_1 if the process is purely isobaric, W_2 if the process is purely isochoric and W_3 if the process is purely adiabatic. Then | | | |
| Answer Options | A) | B) | C) | D) |
| | $W_1 > W_2 > W_3$ | $W_2 > W_1 > W_3$ | $W_1 > W_3 > W_2$ | $W_3 > W_1 > W_2$ |
| Right Answer | C | | | |

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|-----------------|--|-----|-----|---|
| Question No. 46 | A vessel contains a mixture of 1 mole of oxygen and two moles of nitrogen at 300K. The ratio of the rotational kinetic energy per O_2 molecule to that per N_2 molecule is | | | |
| Answer Options | A) | B) | C) | D) |
| | 1:1 | 1:2 | 2:1 | Depends on the moment of inertia of the two molecules |
| Right Answer | A | | | |

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|-----------------|--|------------------|---------------|----------------------|
| Question No. 47 | In a test experiment on a model aeroplane in a wind tunnel, the flow speeds on the lower and upper surfaces of the wing are v and $\sqrt{2}v$ respectively. If the density of air is ρ and the surface area of the wing is A , the dynamic lift on the wing is given by | | | |
| Answer Options | A) | B) | C) | D) |
| | $(\rho v^2 A)/\sqrt{2}$ | $(\rho v^2 A)/2$ | $2\rho v^2 A$ | $\sqrt{2}\rho v^2 A$ |
| Right Answer | B | | | |

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|-----------------|---|-------------------|-------------------|-------------------|
| Question No. 48 | A boy whirls a stone in a horizontal circle 2m above the ground by means of a string 1.25m long. The string breaks and the stone flies off horizontally, striking the ground 10m away. What is the magnitude of the centripetal acceleration during circular motion? (Take $g=10\text{m/s}^2$) | | | |
| Answer Options | A) | B) | C) | D) |
| | 400m/s^2 | 300m/s^2 | 200m/s^2 | 100m/s^2 |
| Right Answer | C | | | |

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|-----------------|--|-----|-----|----|
| Question No. 49 | Radium (with Atomic no. = 87, Mass No. = 221) undergoes radioactive decay with a half-life of 4 days. The probability that a Ra nucleus will disintegrate in 8 days is | | | |
| Answer Options | A) | B) | C) | D) |
| | 1/4 | 3/4 | 1/2 | 1 |
| Right Answer | B | | | |

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|-----------------|--|---------|-----|-------|
| Question No. 50 | A tunnel is dug along the diameter of the earth. An object is held in the tunnel at a distance x from the centre of the earth. The magnitude of the gravitational force on the object is proportional to | | | |
| Answer Options | A) | B) | C) | D) |
| | $1/x$ | $1/x^2$ | x | x^2 |
| Right Answer | C | | | |

| | | | | |
|-----------------|--|------------|----------|----------|
| Question No. 51 | Preheating Temperature of Milk for efficient filtration/ clarification | | | |
| Answer Options | A) | B) | C) | D) |
| | 35- 40 °C | 60 – 65 °C | 75-80 °C | 20-30 °C |
| Right Answer | A | | | |

| | | | | |
|-----------------|------------------------------------|-------------|--------------|------------------|
| Question No. 52 | Type of Yeast used in Bread Making | | | |
| Answer Options | A) | B) | C) | D) |
| | Compressed yeast | Dried Yeast | Both of them | Only Dried Yeast |
| Right Answer | C | | | |

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|-----------------|---|------|----------|--------|
| Question No. 53 | Tofu is a high protein food made from _____ | | | |
| Answer Options | A) | B) | C) | D) |
| | Cheese | Beef | soybeans | casein |
| Right Answer | C | | | |

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|-----------------|--|------|-----|------|
| Question No. 54 | What causes “milk allergy” in human infants when they are fed on cow milk? | | | |
| Answer Options | A) | B) | C) | D) |
| | Ig A | Ig G | IgE | Ig M |
| Right Answer | C | | | |

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|-----------------|--|-------------|------------|-------------|
| Question No. 55 | Which of the following contains the highest level of Immunoglobulins (Ig) in bovine milk?? | | | |
| Answer Options | A) | B) | C) | D) |
| | Early milk (colostrum) | Middle milk | Strippings | Pooled milk |
| Right Answer | A | | | |

| | | | | |
|-----------------|---|----------|------------------|-------------------|
| Question No. 56 | Osmotic pressure of milk is maintained by | | | |
| Answer Options | A) | B) | C) | D) |
| | Lactose | Chloride | Both (A) and (B) | None of the above |
| Right Answer | C | | | |

| | | | | |
|-----------------|--|--------------------|-------------------------|-------------------|
| Question No. 57 | [(100 x per cent chloride)/per cent lactose] is known as | | | |
| Answer Options | A) | B) | C) | D) |
| | Chloride percentage | Lactose percentage | Chloride-lactose number | None of the above |
| Right Answer | C | | | |

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|-----------------|---|-----------------|----------------------|-----------------|
| Question No. 58 | In cheese-making process, which bond of κ -casein is split by chymosin | | | |
| Answer Options | A) | B) | C) | D) |
| | 105-106 Phe-Met bond | 105-106 Ser-Ala | 103-104 Ala-Ile bond | 192-193 Leu-Tyr |
| Right Answer | B | | | |

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|-----------------|---|--------------------|---------------|---------------------------------|
| Question No. 59 | The following form of Lactose is used for seeding of Sweetened Condensed Milk (SCM) | | | |
| Answer Options | A) | B) | C) | D) |
| | α -monohydrate | β -anhydride | Lactose glass | β' – lactose (Beta prime) |
| Right Answer | A | | | |

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|-----------------|---|--|--|---|
| Question No. 60 | In milk protein, Nitrogen of Kjel dahl content is multiplied by 6.38 instead of 6.25 because of | | | |
| Answer Options | A) | B) | C) | D) |
| | significant quantity of S in milk protein | significant quantity of Na in milk protein | significant quantity of Ca in milk protein | significant quantity of P in milk protein |
| Right Answer | D | | | |

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|-----------------|---|------|--------|---------------|
| Question No. 61 | Milk protein may be precipitated from milk with | | | |
| Answer Options | A) | B) | C) | D) |
| | Acid | Salt | Enzyme | All the above |
| Right Answer | D | | | |

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|-----------------|--|-----------------|------------------|---------------|
| Question No. 62 | Failure to inactivate enzymes- protease, lipase, amylase etc. in food can result in development of | | | |
| Answer Options | A) | B) | C) | D) |
| | Off-flavour & rancidity | Dis-colouration | Textural changes | all the above |
| Right Answer | D | | | |

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|-----------------|---|----|----|----|
| Question No. 63 | How many layers are there in an aseptic package | | | |
| Answer Options | A) | B) | C) | D) |
| | 2 | 3 | 4 | 6 |
| Right Answer | D | | | |

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|-----------------|---|--------------------------|--------------|---------------|
| Question No. 64 | Defect of Sandy Texture of Ice cream is caused by | | | |
| Answer Options | A) | B) | C) | D) |
| | Temperature fluctuation in storage | Very long storage period | Both of them | None of them. |
| Right Answer | C | | | |

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|-----------------|--|------------------|--------------------------|-------------|
| Question No. 65 | The most common microbial agent of mastitis in milch animal is | | | |
| Answer Options | A) | B) | C) | D) |
| | Staphylococcus aureus | Escherichia coli | Corynebacterium pyogenes | All of them |
| Right Answer | D | | | |

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|-----------------|---|---------------------|---------------------|---------------|
| Question No. 66 | The chemical sanitizer commonly used in food industries | | | |
| Answer Options | A) | B) | C) | D) |
| | Caustic soda | sodium triphosphate | sodium hypochlorite | None of these |
| Right Answer | C | | | |

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|-----------------|--|------------|--------------|----------------|
| Question No. 67 | All pathogenic organisms are _____ in nature | | | |
| Answer Options | A) | B) | C) | D) |
| | Psychrotrophic | Mesophilic | Thermophilic | Thermotolerant |
| Right Answer | B | | | |

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|-----------------|---|------------|--------------|----------------|
| Question No. 68 | Type of organism responsible for sweet curdling of fluid milk | | | |
| Answer Options | A) | B) | C) | D) |
| | Psychrotrophic | Mesophilic | Thermophilic | Thermotolerant |
| Right Answer | A | | | |

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|-----------------|--|------------|--------------|----------------|
| Question No. 69 | Organisms capable of withstanding pasteurizing temperatures of 63°C/30 min | | | |
| Answer Options | A) | B) | C) | D) |
| | Psychrotrophic | Mesophilic | Thermophilic | Thermotolerant |
| Right Answer | D | | | |

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|-----------------|---|-----------|-------------|-----------------|
| Question No. 70 | E. coli is categorized as _____ microorganism | | | |
| Answer Options | A) | B) | C) | D) |
| | Aerobic | Anaerobic | Facultative | Microaerophilic |
| Right Answer | C | | | |

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|-----------------|---|--------------|--------------|-------------|
| Question No. 71 | Desirable Acidity range (% LA) of Yoghurt as a FG varies from | | | |
| Answer Options | A) | B) | C) | D) |
| | 0.80 to 1.00 | 1.10 to 1.20 | 0.70 to 0.75 | 0.30 to .50 |
| Right Answer | A | | | |

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|-----------------|---|------------------------------|--------------|----------------|
| Question No. 72 | Bacillus cereus can be removed from milk by | | | |
| Answer Options | A) | B) | C) | D) |
| | Immediate cooling of Raw milk | batch pasteurization process | Thermization | Bactofugation. |
| Right Answer | D | | | |

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|-----------------|---|--|---|--|
| Question No. 73 | In Methylene Blue Reduction Test | | | |
| Answer Options | A) | B) | C) | D) |
| | The disappearance of color in a short time indicates high microbial load. | The disappearance of color in a long time indicates high microbial load. | Disappearance of color indicates proper pasteurization of milk. | Disappearance of color indicates presence of E.Coli in milk. |
| Right Answer | A | | | |

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|-----------------|--|---------------------|---------------|--------------------------|
| Question No. 74 | _____ is source of food contamination by Rod Shaped Bacterial (Specially spores) | | | |
| Answer Options | A) | B) | C) | D) |
| | Improper refrigeration | un-cleaned utensils | dirt and dust | washing with plain water |
| Right Answer | C | | | |

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|-----------------|--|-----------------|---------------------------|-------------------|
| Question No. 75 | Media required for identification of presence of Yeast and Moulds in Milk is | | | |
| Answer Options | A) | B) | C) | D) |
| | Tryptone dextrose agar. | Tributyryn Agar | Eosin Mythylene Blue agar | Malt extract agar |
| Right Answer | D | | | |

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|-----------------|--|---------------------------------------|--------------------------------|---------------|
| Question No. 76 | Antimicrobial action of NaCl in food arises as | | | |
| Answer Options | A) | B) | C) | D) |
| | Lowering water activity of food products | Creates dehydration of microbial cell | Decreases oxygen level in food | All of these. |
| Right Answer | D | | | |

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|-----------------|---|-----------------------|--------------------|-------------|
| Question No. 77 | Which of the flowing is/are non-sporulating bacteria? | | | |
| Answer Options | A) | B) | C) | D) |
| | Leuconostoc mesenteroides | Clostridium Botulinum | Bacillus anthracis | All of them |
| Right Answer | A | | | |

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|-----------------|--------------------------------------|--------------------------------------|--------------------|--------------|
| Question No. 78 | Pickling is a result of | | | |
| Answer Options | A) | B) | C) | D) |
| | Fermentation by acetic acid bacteria | Fermentation by lactic acid bacteria | Enzymatic reaction | All of these |
| Right Answer | B | | | |

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|-----------------|--|-------|-------|------------|
| Question No. 79 | Scum formation occurs in pickle due to growth of | | | |
| Answer Options | A) | B) | C) | D) |
| | Pathogenic bacteria | Molds | Algae | Wild yeast |
| Right Answer | D | | | |

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|-----------------|---|----------|----------------------|---------------|
| Question No. 80 | Fermentation of inside tissues of vegetables during pickling causes | | | |
| Answer Options | A) | B) | C) | D) |
| | Cloudiness | Softness | Dull & faded product | None of these |
| Right Answer | D | | | |

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|-----------------|---|----------------------|---------------|---------------|
| Question No. 81 | Contamination of condensed milk with the yeast <i>Torula lactis condensis</i> may cause | | | |
| Answer Options | A) | B) | C) | D) |
| | Bloating | Bacterial thickening | mould buttons | None of these |
| Right Answer | A | | | |

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|-----------------|--|--------------------|------------------------------|-----------------|
| Question No. 82 | Microbial rennet is mainly prepared from | | | |
| Answer Options | A) | B) | C) | D) |
| | <i>A. fumigatus</i> | <i>B. subtilis</i> | <i>B. steurothermophilus</i> | <i>A. niger</i> |
| Right Answer | B | | | |

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|-----------------|---|------------|--------------|---------------|
| Question No. 83 | Molds can grow over a pH range of _____ | | | |
| Answer Options | A) | B) | C) | D) |
| | 1.5 to 9.0 | 4.5 to 7.5 | 6.00 to 7.50 | none of these |
| Right Answer | A | | | |

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|-----------------|---|-------------|-----------|--------------|
| Question No. 84 | Chemical Changes that often used as ripening index of cheese. | | | |
| Answer Options | A) | B) | C) | D) |
| | Glycolysis | Proteolysis | Lipolysis | all of these |
| Right Answer | A | | | |

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|-----------------|---|----------|-------------|------------------------|
| Question No. 85 | Milk constituents responsible for the yellowish color of milk | | | |
| Answer Options | A) | B) | C) | D) |
| | Cephalin | Carotene | Xanthophyll | β -lactoglobulin |
| Right Answer | B | | | |

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|-----------------|---|------------|-------------|--------------------|
| Question No. 86 | Pigment responsible for greenish yellow color of whey | | | |
| Answer Options | A) | B) | C) | D) |
| | β -carotene | Riboflavin | Xanthophyll | α -carotene |
| Right Answer | B | | | |

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|-----------------|--------------------------------|-----------|--------|---------|
| Question No. 87 | Enzyme leads to rancid flavour | | | |
| Answer Options | A) | B) | C) | D) |
| | Protease | Phosphate | Lipase | Analase |
| Right Answer | C | | | |

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|-----------------|---|-------------------------|--------------------|-------------------|
| Question No. 88 | People suffering from lactose intolerance lacking the enzyme of | | | |
| Answer Options | A) | B) | C) | D) |
| | Maltase | β – galactosidase | Pancreatic Amylase | Pancreatic Lipase |
| Right Answer | B | | | |

| | | | | |
|-----------------|--|-----|----|----|
| Question No. 89 | Lactic acid coagulates milk by producing precipitation of Casein at _____pH. | | | |
| Answer Options | A) | B) | C) | D) |
| | 4.6 | 3.5 | 6 | 9 |
| Right Answer | A | | | |

| | | | | |
|-----------------|---|-----------|--------|---------|
| Question No. 90 | In Milk, presence of _____enzyme indicates pasteurization efficiency. | | | |
| Answer Options | A) | B) | C) | D) |
| | Protease | Phosphate | Lipase | Analase |
| Right Answer | B | | | |

| | | | | |
|-----------------|---|---|--|--|
| Question No. 91 | Yield of co-extruded multilayer blown film in pouch-packing = | | | |
| Answer Options | A) | B) | C) | D) |
| | Number of good pouches/rolls of poly-film | (Wastage of film (inKg)/ 1 kg of poly-film) X 100 | Number of good pouches / 1 kg of poly-film | (Number of good pouches / 1 kg of poly-film) X 100 |
| Right Answer | C | | | |

| | | | | |
|-----------------|---|---|--|---|
| Question No. 92 | % overrun of Ice-Cream | | | |
| Answer Options | A) | B) | C) | D) |
| | {(Volume of ice-cream – Volume of Ice Cream Mix) / Volume of Ice Cream} X 100 | {(Weight of Unit Volume of Ice Cream - Weight of Unit Volume of mix)/ Weight of Unit Volume of mix} X 100 | {(Weight of mix - Weight of Ice Cream)/ Weight of mix} X 100 | {(Volume of ice-cream – Volume of Ice Cream Mix) / Volume of Ice Cream Mix} X 100 |
| Right Answer | D | | | |

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|-----------------|--|-------------------------------|---|---|
| Question No. 93 | The Typical Vanilla flavor (as food flavouring agent) is developed | | | |
| Answer Options | A) | B) | C) | D) |
| | When the fruits become mature in Vanilla plant | By fermenting of Vanilla bean | By sun drying of vanilla beans for 4 weeks. | By storing the vanilla beans in cold room for 4 Months. |
| Right Answer | B | | | |

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|-----------------|--|-------------|--------------|--------------|
| Question No. 94 | Use of Saccharine in ice-cream mix causes the problem of | | | |
| Answer Options | A) | B) | C) | D) |
| | Low Total Solid | Low Overrun | Both of them | None of them |
| Right Answer | C | | | |

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|-----------------|---|-----------------------|------------------|---------------------|
| Question No. 95 | The main purpose for addition of salt in Butter | | | |
| Answer Options | A) | B) | C) | D) |
| | Improve keeping quality | For taste enhancement | Increase overrun | For all these three |
| Right Answer | D | | | |

| | | | | |
|-----------------|---|-------------------|-------------------|----------------------|
| Question No. 96 | Temperature of time combination of heat treatment of milk for Dahi processing | | | |
| Answer Options | A) | B) | C) | D) |
| | 90°C for 10 minutes | 82°C for 3 Second | 82°C for 1 minute | 90°C for 2- 3 Second |
| Right Answer | A | | | |

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|-----------------|---|----------|-------------|----------------|
| Question No. 97 | Disturbances or vibrations at the time of curd setting results _____defect in Dahi. | | | |
| Answer Options | A) | B) | C) | D) |
| | Bitterness | Ropiness | Wheying Off | Lump formation |
| Right Answer | C | | | |

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|-----------------|---|-----------|----------------|---------------|
| Question No. 98 | Which state is the largest milk producing state in India? | | | |
| Answer Options | A) | B) | C) | D) |
| | Gujarat | Rajasthan | Andhra Pradesh | Uttar Pradesh |
| Right Answer | D | | | |

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|-----------------|---|---------|--------|---------|
| Question No. 99 | To prepare a toned milk batch of 20000kg, what volume of milk is required having 5.00% fat and 8.5%SNF? (Note: sufficient SMP and water is available to fulfil the requirement) | | | |
| Answer Options | A) | B) | C) | D) |
| | 12000kg | 20000kg | 5000kg | 10000kg |
| Right Answer | A | | | |

| | | | | |
|------------------|---|--|---|--------------|
| Question No. 100 | In Jam/jelly processing which is the process for determination the end-point of boiling | | | |
| Answer Options | A) | B) | C) | D) |
| | By observing percentage of sugar in the mix using refractometer | Observing the boiling temperature of the product by using sugar thermometer. | Drop test of the product into a glass of water. | All of these |
| Right Answer | D | | | |