

# CBSE | DEPARTMENT OF SKILL EDUCATION

## AGRICULTURE (SUBJECT CODE-808)

### Marking Scheme Sample Question Paper Class XII (Session 2020-2021)

Max. Time: 3 Hours

Max. Marks: 70

#### PART A - EMPLOYABILITY SKILLS (10 MARKS):

UNIT NO.	NAME OF THE UNIT	OBJECTIVE TYPE QUESTIONS	SHORT ANSWER TYPE QUESTIONS	TOTAL QUESTIONS
		1 MARK EACH	2 MARKS EACH	
1	Communication Skills-IV	1	1	2
2	Self-Management Skills-IV	2	1	3
3	Information and Communication Technology Skills-IV	1	1	2
4	Entrepreneurial Skills-IV	1	1	2
5	Green Skills-IV	1	1	2
<b>TOTAL QUESTIONS</b>		<b>6</b>	<b>5</b>	<b>11</b>
<b>NO. OF QUESTIONS TO BE ANSWERED</b>		<b>Any 4</b>	<b>Any 3</b>	
<b>TOTAL MARKS</b>		<b>1 x 4 = 4</b>	<b>2 x 3 = 6</b>	<b>10 MARKS</b>

#### PART B - SUBJECT SPECIFIC SKILLS (60 MARKS):

UNIT NO.	NAME OF THE UNIT	OBJECTIVE TYPE QUESTIONS	SHORT ANSWER TYPE QUESTIONS-I	SHORT ANSWER TYPE QUESTIONS-II	DESCRIPTIVE/ LONG ANSWER TYPE QUESTIONS	TOTAL QUESTIONS
		1 MARK EACH	2 MARKS EACH	3 MARKS EACH	4 MARKS EACH	
I	Advance Crop Production	12	2	-	1	15
II	Organic Farming	4	1	1	1	7
III	Postharvest Management	8	1	-	1	10
IV	Food Processing and Value Addition	8	1	1	1	11
V	Subsidiary Enterprises in Agriculture	4	1	1	1	7
<b>TOTAL QUESTIONS</b>		<b>36</b>	<b>6</b>	<b>3</b>	<b>5</b>	<b>50</b>
<b>NO. OF QUESTIONS TO BE ANSWERED</b>		<b>Any 31</b>	<b>Any 4</b>	<b>Any 2</b>	<b>Any 3</b>	<b>40</b>
<b>TOTAL MARKS</b>		<b>1 x 31 = 31</b>	<b>2 x 4 = 8</b>	<b>3 x 2 = 6</b>	<b>5 x 3 = 15</b>	<b>60 MARKS</b>

# CBSE | DEPARTMENT OF SKILL EDUCATION

## Agriculture (SUBJECT CODE 808)

### Blue-print for MARKING SCHEME for Class XII (Session 2020-2021)

Max. Time: 3 Hours

Max. Marks: 70

#### General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of **25 questions** in two sections – Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. **Out of the given (6 + 19 =) 25 questions, a candidate has to answer (6 + 12 =) 18 questions in the allotted (maximum) time of 3 hours.**
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (35 MARKS):**
  - i. This section has 06 questions.
  - ii. There is no negative marking.
  - iii. Do as per the instructions given.
  - iv. Marks allotted are mentioned against each question/part.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (35 MARKS):**
  - i. This section contains 19 questions.
  - ii. A candidate has to do 12 questions.
  - iii. Do as per the instructions given.
  - iv. Marks allotted are mentioned against each question/part.

## SECTION A: OBJECTIVE TYPE QUESTIONS

<b>Q. 1</b>	<b>Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)</b>	
i.	<b>ANSWER</b> d. time	<b>1</b>
ii.	<b>ANSWER</b> c. thinking of past	<b>1</b>
iii.	<b>ANSWER</b> Ctl P	<b>1</b>
iv.	<b>ANSWER</b> Specific, Measurable, Attainable, Realistic, Timely Marks awarded for any four correct answers ((¼ marks for each )	<b>1</b> <b>)</b>
v.	<b>ANSWER</b> d. print	<b>1</b>
vi.	<b>ANSWER</b> a. Reproduce	<b>1</b>

<b>Q. 2</b>	<b>Answer any 7 out of the given 8 questions (1 x 7 = 7 marks)</b>	
i.	<b>ANSWER</b> Coarse cereals of India are: <b>Sorghum, Bajra (Pearl millet), maize, Ragi (finger millet)</b>	<b>1</b>
ii.	<b>ANSWER</b> Major <i>Rabi</i> cereal crops of India: <b>Wheat, barley</b>	<b>1</b>
iii.	<b>ANSWER</b> Major pests of oil seed crops: <b>Aphids, white grub, cut worm, pod borer, jassids</b>	<b>1</b>
iv.	<b>ANSWER</b> <b>Rhizobium, Azotobactor</b>	<b>1</b>
v.	<b>ANSWER</b> Bio-agents used for controlling Agricultural pests in India? Predator like <b>lady bird beetle</b> for many pests, <b><i>Aphelinusmali</i></b> for wooly apple aphid, <b><i>Videlia beetle</i></b> for controlling cottony cushion scale in citrus.	<b>1</b>
vi.	<b>ANSWER</b> Commercial varieties of mango in North India: <b>Dashehari, Langra, Chausa, Bombay Green etc.</b>	<b>1</b>
vii.	<b>ANSWER</b> Value added products from mango fruit: <b>Amchur, pickle, panna, squash, chutney, frooty etc.</b>	<b>1</b>
viii.	<b>ANSWER</b> Scientific name of button mushroom: <b><i>Agaricus bisporus</i></b>	<b>1</b>

<b>Q. 3</b>	<b>Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)</b>	
i.	<b>ANSWER</b> Rhizobium, PSB	<b>1</b>
ii.	<b>ANSWER</b> Food given to honeybee queen: <b>Royal Jelly.</b>	<b>1</b>
iii.	<b>ANSWER</b> Earthworm species for making vermi-compost: <b>Red wigglers (<i>Eisenia fetida</i>) and red worms (<i>Lumbricus rubellus</i>)</b>	<b>1</b>

iv.	<b>ANSWER</b> Potassium containing fertilizers: <b>Sulphate of potash (SOP) and MOP (Muriate of potash)</b>	<b>1</b>
v.	<b>ANSWER</b> <b>Major pulses of India:</b> Black gram, chickpea, moog, pigeon pea, peas	<b>1</b>
vi.	<b>ANSWER</b> <b>Major Kharif cereal crops of India:</b> Paddy, maize	<b>1</b>
vii.	<b>ANSWER</b> <b>CSSRI is located at:</b> Karnal	<b>1</b>

<b>Q. 4</b>	<b>Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)</b>	
i.	<b>ANSWER</b> <b>Major pests of rice are:</b> Plant hopper, leaf folder, stem borer etc.	<b>1</b>
ii.	<b>ANSWER</b> <b>Two major cropping systems are:</b> Rice-wheat, maize-wheat	<b>1</b>
iii.	<b>ANSWER</b> Sauce, ketchup	<b>1</b>
iv.	<b>ANSWER</b> <b>Value added products of aonla fruit are:</b> Candy, RTS, pickle, preserve etc.	<b>1</b>
v.	<b>ANSWER</b> <b>Scientific name of India honey bee:</b> <i>Apis indica</i>	<b>1</b>
vi.	<b>ANSWER</b> <b>Cucurbitaceous vegetables:</b> Pumpkin, cucumber, round melon, musk melon, water melon, karela, tori etc.	<b>1</b>
vii.	<b>ANSWER</b> <b>Major plant nutrients:</b> N,P,K, Ca, Mg, S etc.	<b>1</b>

<b>Q. 5</b>	<b>Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)</b>	
i.	<b>ANSWER</b> <b>Bio-fertilizers commercially used in India:</b> Rhizobium, VAM, Azotobacter, PSB	<b>1</b>
ii.	<b>ANSWER</b> <b>Phosphorus containing fertilizers:</b> Single super phosphate, Double super phosphate, triple super phosphate, Diammonium Phosphate (DAP), Mono ammonium Phosphate (MAP)	<b>1</b>
iii.	<b>ANSWER</b> <b>Major oilseed crops of India:</b> Mustard, Rapeseed, Sunflower, Soybean	<b>1</b>
iv.	<b>ANSWER</b> <b>Major cereal crops of India:</b> Rice, wheat, maize, barley	<b>1</b>
v.	<b>ANSWER</b> <b>CPRI is located at :</b> Shimla (Himachal Pradesh)	<b>1</b>
vi.	<b>ANSWER</b> <b>Four micronutrients for crop are:</b> Iron (Fe), manganese (Mn), zinc (Zn), copper (Cu)	<b>1</b>
vii.	<b>ANSWER</b> <b>Two major cropping systems of India are:</b> Rice–wheat, Maize–wheat	<b>1</b>

<b>Q. 6</b>	<b>Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)</b>	
i.	<b>ANSWER</b> <b>Major pulse crops of India are:</b> Chickpea, pigeon pea, mungbean, Black gram, lentil, peas	<b>1</b>

ii.	<b>ANSWER</b> <b>Value added products of tomato are:</b> Tomato sauce, tomato catch-up, chutney	<b>1</b>
iii.	<b>ANSWER</b> <b>Honey is produced by:</b> Honey bees	<b>1</b>
iv.	<b>ANSWER</b> <b>Cole group vegetables are:</b> Cabbage, cauliflower, broccoli, knoll khol etc.	<b>1</b>
v.	<b>ANSWER</b> National Centre of Organic Farming is located at: Ghaziabad (UP)	<b>1</b>
vi.	<b>ANSWER</b> <b>Earthworm species :</b> <i>Eisenia foetida</i> , <i>Eudriluseuginae</i>	<b>1</b>
vii.	<b>ANSWER</b> <b>Nitrogen containing fertilizers:</b> Urea, Calcium Ammonium Nitrate (CAN)	<b>1</b>

## **SECTION B: SUBJECTIVE TYPE QUESTIONS**

**Answer any 3 out of the given 5 questions on Employability Skills. (2 x 3 = 6 marks)**

**Answer each question in 20 – 30 words.**

Q. 7	<b>ANSWER</b> <b>Parts of a speech are:</b> Eight parts of speech are :Noun, pronoun, verb, adjective, adverb, preposition, conjunction and interjection	<b>2</b>
Q. 8	<b>ANSWER</b> <b>Self-motivation is important because</b> <ul style="list-style-type: none"> <li>• It increases individual's energy and activity.</li> <li>• It directs an individual towards specific goals.</li> <li>• It results in initiation and persistence of specific activities</li> <li>• It affects cognitive processes and learning strategies used for completing similar tasks.</li> </ul>	<b>2</b>
Q. 9	<b>ANSWER</b> Spreadsheet programs have become very popular because of the following features: <ul style="list-style-type: none"> <li>• Built in functions make calculations easier, faster and more accurate.</li> <li>• Large volumes of data can be easily handled and manipulated.</li> <li>• Data can be exported to or imported from other similar software applications</li> <li>• Data can be easily represented in pictorial form like graphs or charts.</li> <li>• Formulae cells get automatically recalculated whenever underlying data values are changed.</li> </ul>	<b>2</b>
Q. 10	<b>ANSWER</b> <b>Barriers to Becoming an Entrepreneur</b> <ul style="list-style-type: none"> <li>• Lack of supportive and market</li> <li>• Employee related difficulties</li> <li>• Market entry regulations:</li> <li>• Governmental rules</li> <li>• Shortage of funds and resources</li> <li>• Lack of Entrepreneurial Capacity:</li> <li>• Lack of Adequate Entrepreneurship Training:</li> <li>• Lack of Appropriate Technical and Practical Skills</li> <li>• Fear of Failure</li> </ul>	<b>2</b>

<b>Q. 11</b>	<b>ANSWER</b> <b>Roles of green jobs</b> <ul style="list-style-type: none"> <li>• In toxin free homes</li> <li>• In improving energy and raw material use</li> <li>• Limiting greenhouse gas emission</li> <li>• Minimizing waste and pollution</li> <li>• Protecting and restoring ecosystems</li> <li>• Support adaptation to the effects of climate change</li> </ul>	<b>2</b>
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**Answer any 4 out of the given 6 questions in 20 – 30 words each (2 x 4 = 8 marks)**

<b>Q. 12</b>	<b>ANSWER</b> <b>Advantages of organic farming</b> <ul style="list-style-type: none"> <li>• <b>Farmers</b> can reduce their production costs because they do not need to buy expensive chemicals and fertilizers.</li> <li>• Improvement in fertility status of soil.</li> <li>• Improves soil structure and structure.</li> <li>• Healthier <b>farm</b> workers.</li> <li>• In the long term, <b>organic farms</b> save energy and protect the environment.</li> <li>• It can slow down global warming.</li> <li>• Fewer residues in food.</li> </ul>	<b>2</b>
<b>Q. 13</b>	<b>ANSWER</b> <b>Crop rotation</b> is the practice of growing a series of dissimilar or different types of <u>crops</u> in the same area in sequenced <u>seasons</u> . It is done so that the <u>soil</u> of farms is not used for only one set of nutrients. It helps in reducing <u>soil erosion</u> and increases <u>soil fertility</u> and <u>crop yield</u>	<b>2</b>
<b>Q. 14</b>	<b>ANSWER</b> <b>Major methods of irrigation</b> <ul style="list-style-type: none"> <li>• Surface <b>irrigation</b>. Water is distributed over and across land by gravity, no mechanical pump involved.</li> <li>• Localized <b>irrigation</b>. ...</li> <li>• Drip <b>irrigation</b>. ...</li> <li>• Sprinkler <b>irrigation</b></li> </ul>	<b>2</b>
<b>Q. 15</b>	<b>ANSWER</b> <b>Post-harvest technology</b> is an inter-disciplinary "Science and Technique" applied to agricultural produce <b>after harvest</b> for its protection, conservation, processing, packaging, distribution, marketing, and utilization to meet the food and nutritional requirements of the people in relation to their needs.	<b>2</b>
<b>Q. 16</b>	<b>ANSWER</b> <b>Plant based bio-pesticides</b> These are the plant derived naturally occurring phyto-chemical pesticides that control pests by various mechanisms with less or no harm to human beings and crop plants	<b>2</b>
<b>Q. 17</b>	<b>ANSWER</b> <b>Bee species</b> <ol style="list-style-type: none"> <li>1. The rock bee (<i>Apis dorsata</i>)</li> <li>2. The Indian hive bee (<i>Apis indica</i>)</li> <li>3. The little bee (<i>Apis florea</i>)</li> <li>4. The European or Italian bee (<i>Apis mellifera</i>)</li> </ol>	<b>2</b>

Answer any 2 out of the given 3 questions in 30– 50 words each (3 x 2 = 6 marks)

Q. 18	<p><b>ANSWER</b></p> <p><b>Major functions of N in plants are:</b></p> <ul style="list-style-type: none"> <li>• It makes plant dark green &amp; succulent.</li> <li>• It promotes vegetative growth.</li> <li>• it is a major component of chlorophyll, which helps in food making by photosynthesis.</li> <li>• It is also a major component of amino acids, the building blocks of proteins.</li> </ul>	3
Q. 19	<p><b>ANSWER</b></p> <p><b>Major function of Sulphur in plants are</b></p> <ul style="list-style-type: none"> <li>• Chlorosis of the longer leaves</li> <li>• If deficiency is severe, Entire plant can be chlorotic and stunted</li> <li>• Promotion of nodulation for N fixation by legumes</li> <li>• It increases oil content in oil seed crops</li> </ul>	3
Q. 20	<p><b>ANSWER</b></p> <p><b>Role of maturity</b></p> <ul style="list-style-type: none"> <li>• Immature fruit don't develop adequate size, colour and flavour and poor quality and have less storage life.</li> <li>• Over mature fruit develop several storage disorders with very low shelf life.</li> </ul>	3

Answer any 3 out of the given 5 questions in 60– 90 words each (5 x 3 = 12 marks)

Q. 21	<p><b>ANSWER</b></p> <p><b>Integrated pest management</b></p> <p>It is also known as integrated pest control (IPC) which is a broad-based approach that integrates practices for <u>economic control of pests</u>. IPM aims to suppress pest populations below the economic injury level (EIL).</p> <p><b>Biological control of pests</b></p> <p><b>Use of Predators:</b> Predators catch and eat their prey. Some common predatory arthropods include ladybird beetles, carabidae (ground) beetles, big-eyed bugs, and spiders.</p> <p><b>Use of Parasitoids:</b> Parasitoids (sometimes called parasites) do not usually eat their hosts directly. Adult parasitoids of caterpillars and host insect, such as nectar or pollen.</p> <p><b>Use of Pathogens:</b> Pathogens are disease-causing organisms. with your certifier before using this. Several <u>insect-pathogenic fungi</u> are used as microbial control agents, ... insect-parasitic (entomopathogenic or insecticidal) nematodes... to be effective</p>	5
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<p><b>Q. 22</b></p>	<p><b>ANSWER</b></p> <p><b>a. Harvesting:</b> - There is an optimum time for harvesting cereals, depending on the maturity of the crop and the climatic conditions. This has a significant effect on the quality of the grain during storage.</p> <p>Harvesting often begins before the grain is ripe and continues until mould and insect damage are prevalent. Grain not fully ripened contains a higher proportion of moisture and will deteriorate more quickly than mature grains because the enzyme systems are still active.</p> <p>Cereals are traditionally harvested manually. There are three main types of harvesting equipment for the small scale producer: manual, animal powered and engine powered. Harvested crops are left in the field for a few days to dry before further processing.</p> <p><b>b. Threshing:</b> - Threshing is the removal of grains from the rest of the plant. It involves three different operations: Separating the grain from the panicle; sorting the grain from the straw; winnowing the chaff from the grain.</p> <p>Separation of the grain from the panicle is the most energy-demanding of the three processes. It is the first process to have been mechanized. Sorting the grain from the straw is relatively easy, but is difficult to mechanise. Winnowing is relatively easy, both by hand and by machine.</p> <p>A range of engine powered threshers are available.</p> <p><b>c. Winnowing:</b> - Winnowing is the separation of the grains from the chaff or straw. It is traditionally carried out by lifting and tossing the threshed material so that the lighter chaff and straw get blown to one side while the heavier seeds fall down vertically.</p> <p>Hand-held winnowing baskets are used to shake the seeds to separate out the dirt and chaff. They are very effective, but slow.</p> <p>There is a range of winnowing machines that use a fan to create artificial wind. This speeds up the winnowing process.</p> <p>Some of these contain sieves and screens that grade the grains as well.</p> <p><b>d. Drying:</b> - Prior to storage or further processing, cereal grains need to be dried. The most cost-effective method is to spread out in the sun to dry. In humid climates it may be necessary to use an artificial dryer.</p> <p>Cereal grains should be dried to 10-15% moisture before storage.</p>	<p><b>5</b></p>
<p><b>Q. 23</b></p>	<p><b>ANSWER</b></p> <p><b>Vermi-composting:</b> It is a method of using earthworms to transform organic waste into nutrient-rich fertilizers. It is a healthy and clean way to eliminate wastes materials, which improves the environment. Vermi-composting is inexpensive, and only takes two to three months to produce results.</p> <p><b>Advantage of vermi-composting</b></p> <ol style="list-style-type: none"> <li>1. Vermicompost is rich in all essential plant nutrients.</li> <li>2. It improves soil texture, structure and aeration.</li> <li>3. It neutralizes the soil protection.</li> <li>4. Vermicompost is free flowering, easy to apply, handle and store.</li> <li>5. Vermi-compost is rich in beneficial micro flora such as fixers, p- solubilizer.</li> <li>6. Vermi-compost contains earthworms, cocoons and increases the population and activity.</li> </ol>	<p><b>5</b></p>

<p><b>Q. 24</b></p>	<p><b>ANSWER</b> Types of garden</p> <p><b>1.FORMAL STYLE</b></p> <ul style="list-style-type: none"> <li>• The gardens of Greece and Rome assured an emotional security though their Formal style.</li> <li>• The Italian renaissance garden was having intricate geometric, sheared trees, trimmed hedges and edges to create formality</li> <li>• The impact of formalism influenced the French and British gardens also in the form of parierre, the much-divided flower beds.</li> </ul> <p><b>2.INFORMAL STYLE</b></p> <ul style="list-style-type: none"> <li>• Hindu Buddhist and Japanese garden laid no emphasis on formality.</li> <li>• Brindavan of lord Krishna was a wood land.</li> <li>• Every temple was provided with irregular shaped lotus tanks.</li> <li>• Japanese developed an intensely national and naturalistic style of its own.</li> </ul> <p><b>3.FREE STYLE</b></p> <ul style="list-style-type: none"> <li>• This style combines the good points of both formal and informal style of gardening. Rose garden of Ludhiana is an example of this style of gardening.</li> </ul>	<p><b>5</b></p>
<p><b>Q. 25</b></p>	<p><b>ANSWER</b></p> <p><b>Post-harvest management</b> Post-harvest management comprises the various technologies and practices undergone by the farmer, farmers' groups or cooperatives and/or agribusiness companies, from the field to the plate, to handle the crop production immediately following harvest, up to its final destination, such as storing, transport, cleaning, sorting, processing and packing.</p> <p><b>PHM of mango</b></p> <ul style="list-style-type: none"> <li>• Harvesting at right stage of maturity as per end use.</li> <li>• Harvesting in the morning hours</li> <li>• Harvesting with a harvesting tool</li> <li>• De-sapping</li> <li>• Pre-cooling</li> <li>• Sorting</li> <li>• Grading</li> <li>• Post-Harvest treatments (HWT, VHT, Chemical treatments etc.)</li> <li>• Packing in CFB single layer boxes</li> <li>• Storage at 10-13 °C</li> <li>• Transportation to distant markets.</li> </ul>	<p><b>5</b></p>