

**CLASS : 12th (Sr. Secondary)**

**2077/2027**

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**MARKING INSTRUCTIONS AND MODEL ANSWERS**

**AGRICULTURE**

**ACADEMIC/OPEN**

**1st SEMESTER**

(Only for Fresh Candidates)

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उप परीक्षक मूल्यांकन निर्देशों का ध्यानपूर्वक अवलोकन करके उत्तर-पुस्तिकाओं का मूल्यांकन करें। यदि परीक्षार्थी ने प्रश्न पूर्ण व सही हल किया है तो उसके पूर्ण अंक दें।

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**General Instructions :**

- (i) Examiners are advised to go through the general as well as specific instructions before taking up evaluation of the answer-books.
- (ii) Instructions given in the marking scheme are to be followed strictly so that there may be uniformity in evaluation.
- (iii) Mistakes in the answers are to be underlined or encircled.
- (iv) Examiners need not hesitate in awarding full marks to the examinee if the answer/s is/are absolutely correct.

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- (v) Examiners are requested to ensure that every answer is seriously and honestly gone through before it is awarded mark/s. It will ensure the authenticity as their evaluation and enhance the reputation of the Institution.*
  - (vi) A question having parts is to be evaluated and awarded partwise.*
  - (vii) If an examinee writes an acceptable answer which is not given in the marking scheme, he or she may be awarded marks only after consultation with the head-examiner.*
  - (viii) If an examinee attempts an extra question, that answer deserving higher award should be retained and the other scored out.*
  - (ix) Word limit wherever prescribed, if violated upto 10%. On both sides, may be ignored. If the violation exceeds 10%, 1 mark may be deducted.*
  - (x) Head-examiners will approve the standard of marking of the examiners under them only after ensuring the non-violation of the instructions given in the marking scheme.*
  - (xi) Head-examiners and examiners are once again requested and advised to ensure the authenticity of their evaluation by going through the answers seriously, sincerely and honestly. The advice, if not headed to, will bring a bad name to them and the Institution.*
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**महत्त्वपूर्ण निर्देश :**

- (i) अंक-योजना का उद्देश्य मूल्यांकन को अधिकाधिक वस्तुनिष्ठ बनाना है। अंक-योजना में दिए गए उत्तर-बिन्दु अन्तिम नहीं हैं। ये सुझावात्मक एवं सांकेतिक हैं। यदि परीक्षार्थी ने इनसे भिन्न किन्तु उपयुक्त उत्तर दिए हैं, तो उसे उपयुक्त अंक दिए जाएँ।
- (ii) शुद्ध, सार्थक एवं सटीक उत्तरों को यथायोग्य अधिमान दिए जाएँ।
- (iii) परीक्षार्थी द्वारा अपेक्षा के अनुरूप सही उत्तर लिखने पर उसे पूर्णांक दिए जाएँ।
- (iv) वर्तनीगत अशुद्धियों एवं विषयांतर की स्थिति में अधिक अंक देकर प्रोत्साहित न करें।
- (v) भाषा-क्षमता एवं अभिव्यक्ति-कौशल पर ध्यान दिया जाए।
- (vi) मुख्य-परीक्षकों/उप-परीक्षकों को उत्तर-पुस्तिकाओं का मूल्यांकन करने के लिए केवल Marking Instructions/ Guidelines दी जा रही हैं, यदि मूल्यांकन निर्देश में किसी प्रकार की त्रुटि हो, प्रश्न का उत्तर स्पष्ट न हो, मूल्यांकन निर्देश में दिए गए उत्तर से अलग कोई और भी उत्तर सही हो तो परीक्षक, मुख्य-परीक्षक से विचार-विमर्श करके उस प्रश्न का मूल्यांकन अपने विवेक अनुसार करें।

**Note :** May be carefully marks are given against each question. Possible answers are given below.

Out of first four questions only **three** are to be answered each has four marks.

1. What is staple food for millions of in the country.  
It is consumed almost all over the country. It is

very important rabi crop. Its main varieties are PBW 343, UP 2338, WH 283. WH 542. WH 711, PBW 373. Raj 3765, C 306 HD 2687, WH 147, DBW17 etc. Time of sowing of wheat in north India is November to December depending upon variety and availability of land. Its seed rate is about 40 kg per acre. Main diseases are yellow rust. Brown rust, Loose smut, Flag smut, Black rust, Karnal bunt. Molya etc. Pesticides used are Dithane Z-78. Rexil 2, vitave or bavistin. thirum, carbofuron, which are different for different dieases/pests. 1, 1, 1, 1

2. Potato is very important vegetable. Its main varieties are Kufri-Sundari, Kufri Badshah, Kufri Satluj. Kufri Chandermukhi etc. Its seed rate is 14-16 quintals per acre. It is sown on ridges and in furrows where water is applied. State and Central Governments are doing research through its research institutes and bringing out new varieties with better yield. Foundation seed is also produced by them for giving to farmers. Technical know how is also provided to farmers about the by extension agencies. 1, 1, 1, 1
3. Soil play an important role in growing the plats. It provide and other nutrients required by the plants for its growth. It also support the plants. Problematic soils are those where salts in the soils are present which do not allow the plants to grow, the soils are saline, alkaline, acidic. waterlogged, undulating etc. Farm Yard Manure is made by rotting the animal dung and other agricultural and domestic waste in the pits and having some moisture. FYM is rich source of organic matter and other nutrients which are very useful for crop production. 1 + 1 + 1 + 1

4. Main methods of irrigation are drip, sprinkler, border strips, ridge and furrow, with small plots etc. and some brief of any one method. Sources of irrigation are tube wells and canals. however main source is rain fall and snow in the hilly areas Main sources of canal irrigation are Bhakhra system and Yamuna system. Bhakhra system is basis on storage and Yamuna system is not stored and is continuous flow. Only barrage is there to divert water. These system works on the Varabandi and water is mostly gravity flow through canals and minors. Other source of irrigation is by tubewells which are owned by individual farmers and most are electrified. People at few places take water from drains, lake. ponds and from dams. 1, 2, 1
5. Only any **six** out of **seven**, each has **three** marks.  $6 \times 3 = 18$
- (i) Grain crops are bajra (Millets), maize, gram and other pulses, wheat, barley, fruits are citrus, ber, kair. guava and vegetables are chilies, tomato, brinjals. cluster beans, etc.
  - (ii) Constituents soil are sand, clay, loam. It also contains air. organic matter and moisture.
  - (iii) Main fruits produced In India are mango, banana, apples. Guava, pomegranate, litchi, Papaya. chiku . Jamun. grapes etc.
  - (iv) Irrigation provide moisture to crops which is must for plant growth. If required water is not given to crops than plants cannot survive. Best method of irrigation is drip irrigation where there is no wastage of

water, however, it is not feasible on all crops then sprinkler irrigation is also another good method.

- (v) Weeding is done to get rid of unwanted plants (weeds) otherwise they will compete for water and nutrients with crops. Weeding is useful for the crops. Main methods of weed control are chemical, mechanical and cultural.
- (vi) Washing, drying, grading, processing, packing, weighing, transporting, stacking etc. The uses of these operations are it reduces wastage, bring more prices to the producers.
- (vii) Processing is a process by which its quality, shelf life, taste etc. is added, It is value addition process can be any depending on the product to be processed it can be heating, boiling, drying, adding some thing like preservative taking juice etc.

**6.** Only any **nine** out of **ten**, each has **two** mark.

$$9 \times 2 = 18$$

- (i) Main varieties of maize are Navjot, Prabhat, Ganga-5, HHM-1, HHM-2, HQPM-I kanchan, HM-4 etc.
- (ii) Pulses are Food grain crops and these are green gram(moog), black gram (urd), lentin(masar), red gram(arhar), horse gram, black gram, chick pea, soyabean ., These are useful and rich source of protein.

- (iii) Sugarcanes are processed in sugar mill or in small cane crushers to take out juice. Juice is filtered, boiled to make it thick and waste is separated and allowed to solidifying. It gives us sugar, gur, khand, nonwhite sugar. It also provide molasses, waste and baggase (used as fuel)
- (iv) Water logging is a condition when water remains on surface or soil profile remains saturated and it is not possible to cultivate the area. It also destroy other vegetation
- (v) Weeding is done to get rid of unwanted plants (weeds). Good method of de-weeding is mechanical where weeds can be fed to cattle but it time consuming and require labour. The other is cultural, where crop rotation takes place.
- (vi) Water goes into soil through its pores by gravity when applied and make the profile saturated.
- (vii) Horticulture department in each state where various technical persons, knowing their subject are serving and helping the farmers on various issues related with fruits and vegetables and extending help to the farmers. Department implements many schemes which are beneficial to farmers and also coordinate with government of India on various issues and schemes.
- (viii) Chemical fertilizers are Urea. CAN. kisan khad, rnurate of potash. NPK, ANP. Single Super Phosphate. Ammonia sulphate. (DAP)Di- ammonium phosphate. Zinc sulphate.

- (ix) Green manuring is a process by which crops like Datura, sun hemp, even some pulses are grown and then these are ploughed back to field after some growth (about half to one metre). It is very useful and add organic matter to soil.
- (x) Oil seed crops are mustard, taramira. sun flower, ground nut, til, Alsi, soyabean etc.

**7.** Only **twelve** are to be answered, each has **one** mark. Answers are to be given in **Yes** or **No**.

$$12 \times 1 = 12$$

- (i) Yes  
(ii) No  
(iii) No  
(iv) Yes  
(v) Yes  
(vi) No  
(vii) No  
(viii) Yes  
(ix) No  
(x) Yes  
(xi) Yes  
(xii) No  
(xiii) Yes
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