

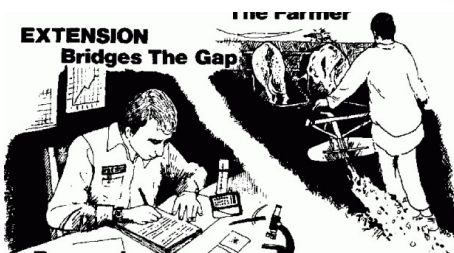
Learn... Unlearn... Relearn...



Explore Questions

TNPSC – AAO

Equip for Learning... Prepare for Unlearning... Practice for Relearning...



Paper I AGRICULTURE

As per the Revised & Updated Syllabus of TNPSC

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Foreword

Dear Friends,

Greeting from SAAI Academy!

- ***DON'T USE THIS BOOK, IF YOU HAVE JUST APPLIED FOR TNPSC - Assistant Agriculture Officer POST!***
- ***STUDY IF YOU ARE WILLING TO SUCCEED AND BE A ASSISTANT AGRICULTURE OFFICER AS YOUR CAREER!***

This is the book with **Gist and important questions on the series for TNPSC – AAO Exams**. It contains the Core Paper such as *Agronomic principles, practices and meteorology, Farming system, Dry Farming and Agro-Forestry, Soil and Fertility Management, Horticultural Crop Cultivation Techniques, Breeding and Seed Production, Plant Protection Principles and Practices, Livestock, Poultry Management, Artificial Insemination and Calf Rearing, Farm Machinery, Post Harvest Technology and Energy and Environment, Commercial Agriculture and Agricultural Extension, Agricultural Economics and Digital Agriculture* with special references to TNPSC Revised Syllabus for the candidates of **Diploma in Agriculture**. It is systematically compiled in a student-friendly manner and updated by keeping in mind on the present trends in TNPSC Exam patterns.

You are expected to be self-disciplined and self-motivated, and are **requested to prepare different models of questions as explained during the orientation programme**. **Self-Confidence with Systematic and SMART preparation would definitely make you a frontrunner.**

Wish you ALL THE BEST for your success in TNPSC-AAO exam. For further details please contact saaistudies@gmail.com or call +91-93821 32593.

Regards

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$$\text{Intelligent Quotient-I.Q. (\%)} = \frac{\text{Mental age}}{\text{Chronological age}} \times 100$$

*Formulae of Intelligent Quotient-I.Q. (%) = $\frac{\text{Mental age}}{\text{Chronological age}} \times 100$

*The method of face-to-face or person-to-person contact between the rural people and extension workers-Individual contact

*Farm and home visit, Office calls, Telephone calls, Personal letters, Result Demonstration are comes under -Individual contact

*A method in which 20 to 30 rural people or farmers are contacted in a group-Group-contact

*Conferences, Pannel, Symposium, Discussion, Meeting, Workshops, Field trips, Tour are comes under -Group contact

*The media used for mass contact-Radio, Television, Exhibitions, Bulletins, Leaflets, News letter, Circular letters, Posters, folder/pamphlet etc.

*A sheet of paper with pictorial slogan, which is utilized to attract the mass attention for single idea.-Poster

*The most common size of poster-50cm x 75cm

*Round table discussion is called-Panel

*Mostly widely used pamphlet size-12 to 24 pages

*A published material on a small paper in which there is brief information of a subject-Leaflet

*When a paper folds ones or twice with detail information on specific aspects is called as-Folder

*A small published book consisting of 24 to 48 pages-Bulletin

*A series of illustrated cards flashed before a group in proper sequence to tell a complete story step by step to the group of the learners.-Flash cards

*For a group of 10-25, people use flash cards of size-10"x12" (25 cm x 30 cm)

*The letter used to send the same information to many people at the same time is called-Circular Letter

*When two or more brief talks presenting phases of the some general topic called-Symposium

*A systematic display of models, specimens, charts, real objects and any informative materials.-Exhibition

*The basic principle of Demonstration-Learning by seeing and doing

*The concept of demonstration was given by-Dr. Seeman A. Knapp

*Method demonstration is-Short -type demonstration



The concept of Minimum Support Price was first introduced for wheat in 1966-67.

The Government of India has recently hiked the minimum support price for wheat by Rs 40 making it INR 2015 per quintal now.

Currently, the government fixes MSPs for 23 crops grown in both kharif and rabi seasons.

MSP is the rate at which the government buys the grain from farmers.

The Rabi crops are sown in the month of October, basically the mid of the month.

The Government has hiked the mustard price by INR 400 to make it ₹5,050 per quintal

The Cabinet Committee on Economic Affairs based on the recommendations of CACP fixes the MSP.

Mustard is a Rabi crop and not a Kharif crop.

Rabi crops include crops like barley, wheat, gram, safflower, lentils etc.

Kharif crops are sown in the first rains that is in the month of July and are harvested around October.

Which index in India is used to evaluate inflation? Wholesale price index

Who releases the figures of the wholesale price index? Ministry of Commerce and Industry

What does the consumer price index (CPI) calculate? Price of both goods and services

How often is the data of the consumer price index (CPI) released? Every month

Who issues the data of the consumer price index (CPI)? Ministry of Statistics and Program Implementation

How many products are included in the wholesale price index (WPI)? 697

Which of the following is not an inventory? Machines

The following classes of costs are usually involved in inventory decisions except Machining cost

The cost of insurance and taxes are included in Inventory carrying cost

'Buffer stock' is the level of stock Minimum stock level below which actual stock should not fall



Agrocin 84	<i>Agrobacterium radiobacter</i>	<i>Agrobacterium tumefaciens</i>	Crown gall
Bacillomycin D	<i>Bacillus subtilis</i> AU195	<i>Aspergillus flavus</i>	Aflatoxin contamination
Bacillomycin, fengycin	<i>Bacillus amyloliquefaciens</i> FZB42	<i>Fusarium oxysporum</i>	Wilt
Xanthobaccin A	<i>Lysobacter</i> sp. strain SB-K88	<i>Aphanomyces cochlioides</i>	Damping off
Glilotoxin	<i>Trichoderma virens</i>	<i>Rhizoctonia solani</i>	Root rots
Herbicolin	<i>Pantoea agglomerans</i> C9-1	<i>Erwinia amylovora</i>	Fire blight
Iturin A	<i>B. subtilis</i> QST713	<i>Botrytis cinerea</i> and <i>R. solani</i>	Damping off
Mycosubtilin	<i>B. subtilis</i> BBG100	<i>Pythium aphanidermatum</i>	Damping off
Phenazines	<i>P. fluorescens</i> 2-79 and 30-84	<i>Gaeumannomyces graminis</i> var. <i>tritici</i>	Take-all
Pyoluteorin, pyrrolnitrin	<i>P. fluorescens</i> Pf-5	<i>Pythium ultimum</i> and <i>R. solani</i>	Damping off
Pyrrolnitrin, pseudane	<i>Burkholderia cepacia</i>	<i>R. solani</i> and <i>Pyricularia oryzae</i>	Damping off and rice blast
Zwittermicin A	<i>Bacillus cereus</i> UW85	<i>Phytophthora medicaginis</i> and <i>P. aphanidermatum</i>	Damping off

Mushroom

___ is known as temperature tolerant white button mushroom. *Agaricus bitorquis*

Agaricus bisporus belongs to family ___. Agaricaceae

___ toxin is present in *Amanita muscaria*. Ibotenic acid

___ is known as 'king oyster mushroom'. *Pleurotus eryngii*

Formaldehyde is used as ___ in mushroom cultivation. Disinfectant

Short method of button mushroom compost preparation requires ___ days. 14-18 days

What is the other name of Mushroom? *Agaricus*

To which division does Mushroom belong? Basidiomycetes

Mushroom is: Saprophytic fungus

- *Diploid variety of apples are **Self fertile**
- *Usually apple is graded on **6 size**
- *Discolouration of apple after cutting is due to **Enzymes**
- *Commercial propagating method of grapevine **Hard wood cutting**
- *Arka Hans is a cross of **Banglore Blue × Anab-e-shahi**
- *Most widely accepted training system of grapevine in India **Bower system**
- *Which is used for improving fruit quality of grape? **20 ppm GA**
- *Which fruit is commonly known as "*Kalpavriksha*" **Coconut**
- *Cashew nut and almond are the richest source of **Fat**
- *Richest source of Iron **Karonda**

FRUIT TYPES AND EDIBLE PARTS OF DIFFERENT CROPS

- All cereals crops and grasses - Caryopsis - Endosperm and Embryo
- Most of leguminous crops i.e. gram, Pea - Legume/Pod - Seed/Cotyledons
- Groundnut - Lomentum - Seed/Cotyledons
- Mango - Drupe - Mesocarp
- Ber, Plum, Datpalm - Drupe - Apicarp and Mesocarp
- Tomato, Grape, Brinjal, Banana, Chilli - Berry - Pericarp and Placenta
- Papaya - Berry - Mesocarp
- Citrus spp. - Hesperidium - Endocarpic juicy hairs
- Pomegranate - Blusta - Aril
- Apple, Pear - Pome - Mansal thalamus
- Cucurbits - Pipo - Apicarp and Mesocarp
- Coconut - Nut - Endosperm
- Jackfruit, Pineapple - Sorosis - Bracts/Perianth



Unit-VII- Livestock, Poultry Management, Artificial Insemination and Calf Rearing

For entry in the central herd registers, the animal must be over: 6 month of age

On an average, the required space for standing of a horse is 3m*

Breed of poultry, which produces white shelled eggs: a. Minorca b. White leghorn c. Dorking

Which inlet device is used in king's system of ventilation? Tobine tube

It is the place where cow gets fresh air and sunshine: Paved area

For better time management, which of the following intensive housing system is preferred? Tail to tail

Ghee produced from buffalo milk is white in color due to Carotene

How much milk should be fed per day to a calf during second weeks? 1/10th b.wt.

Mark the optimum age for castration of male calves by bloodless castration methods: 4-6 month

Average % of body weight due to blood in cow is 7.7

Mark the size of stanchion stall per cow: 1.2* 1.5m

Bovine Female with its offspring is called Calf at foot

Mark the age of calf when calf starter can be fed in gruel form: 2 week

Mark the air space for cows sufficient to provide enough ventilations: 22.5 metre square

The species which cannot convert glucose to fat is Caprine

Most essential vaccination in goat is Enterotoxaemia

One livestock unit is equal to Body weight of 500 kg

Mark the score point of a dairy cow judged on type and appearance by score card method: 85-90

Cows maintain their body temperature through dewlaps

Best method of milking – Full hand milking

Piennu is cross of cow with yak

An ideal calf starter contains 20% DCP and 70% TDN



- *One particular day, if the rain received 2.5 mm or more-**Rainy day**
- *An average size of rain drop-**2 mm dia**
- *Atmospheric water is known as-**Green water**
- *Soil water is known as-**Blue water**
- *Which clouds are known as rainy clouds?-**Nimbo-stratus and Cumulonimbus**
- *Clouds types which give the heavy and continuous precipitation-**Cumulonimbus**
- *An aggregation of minute drops of water suspended in the air at higher altitude termed as-**Clouds**
- *The unit used to record clouds-**Okta**
- *Cold cloud seeding is done by use of chemical-**Silver iodide (AgI₂)**
- *Warm cloud seeding is done by-**Sodium chloride (NaCl)**
- *Indian Meteorological Organization (IMD) situated in-**Pune (1932)**
- *Phenomenon of warming of eastern pacific-**El nino**
- *Phenomenon of cooling of eastern pacific-**Li nino**
- *Which surface has least Albedo?-**Moist black soil**
- *An engine of desertification-**Drought**
- *A period of 4 consecutive weeks from May to mid October or 6 consecutive weeks during rest of the year-**Agriculture drought**
- *Widely used index for classification of droughts-**Palmer drought index**
- *The branch of science in which, the collection and interpretation of information about a target without being in physical contact with it?-**Remote Sensing**
- *National Remote Sensing Agency (NRSA) is situated at-**Hyderabad**
- *Medium range weather forecasting is done for-**3-10 days**
- *Forecast will help in planning cropping pattern-**Long range weather**
- *According to Planning Commission, Agro Climatic Zones in India are-**15**
- *According to NBSSLUP, Agro Ecological Regions in India are-**21**
- *A natural warming process involving the interaction of sunlight and carbon dioxide and other gases from the atmosphere-**Green house effect**

(IX) Soil and Water Conservation

- *Detachment and transportation of top soil particles by wind and or by water is known as. -**Soil erosion**
- *What are the types of soil movement in the process of wind erosion? -**Saltation, Suspension and Surface creep**
- *About 50-75% of soil erosion by wind is carried out by -**Saltation**
- *Very fine soil particles (<0.1 mm dia) eroded by mechanism -**Suspension**
- *Removal of soil particles due to rain drops (through bouncing) is called -**Splash erosion**
- *Which mechanism of water erosion is known as "Death of Farmers"? -**Sheet erosion**
- *Chenalization begins from which mechanism of water erosion? -**Rill erosion.**
- *The advanced stage of gully erosion is -**Ravines**
- *Average soil loss million tonnes/year in India is -**5,333**
- *The land capability classes suitable for crop cultivation are -**Class I to III**
- *According to USDA classification, the land belongs to class VI and VII are suitable for -**Timber cum fiber farming**
- *Agronomical measures are adopted only where land slope is -**<2%**
- *Mechanical measures are adopted only where land slope is -**>2%**
- *Vertical mulches are used only in -**Black cotton soil**
- *The most popular mechanical measure to control soil erosion and conserve is -**Contour Bunding**
- *Contour Bunding is adopted where -**Land slope (6 %) and in areas where average annual rainfall is < 600 mm.**
- *Bench Terracing is practiced on -**Steep slopping (16-33%) and undulated land**
- *The crop grown on degraded land for improvement is called -**Conservation crop**
- *The full form of LEISA is -**Low External Input Sustainable Agriculture**
- ☐ Tetrazolium Test is conducted for - **Viability and Vigour of seed.**
- ☐ First cultivated crops in the world are - **Wheat & Barley.**
- ☐ International meteorological organization was established in - **1873**

Unit -I -Agronomic principles, practices and meteorology

Total agricultural land in the world –7.5%

- Total agricultural based population in the world is –54%
- Highest agricultural based population country – malawi (AFRICA)– 92%
- LOWEST agricultural based population country – UK – 6%
- India agricultrual population – 64%
- India agriculture contributes almost 4% of gdp
- Total agricultural land – out 100% – food crops –74% , cash crops –26%
- Food crops – rice , wheat , maize , bazra
- Beverage crops – coffee , tea
- Fiber crops– jute, cotton
- Oil seeds – groundnuts , sunflower
- Narcotic crops – tobacco
- Plantation crop – tea , coffee, rubber
- Sugar crops – sugarcane , beet root
- Spice crops – mirchi , turmeric, ginger , pepper
- Horticultural crops – all types of fruits

FOOD CROPS

1. RICE – world wide china tops – next india , in india – w.bengal , AP , UP , PUNJAB
2. WHEAT – top -3 China, india, USA , IN india – up , punjab, harayana
3. JOWER – top – USA , CHINA ,, in india – maharastra , karanatka , mp
4. MAIZE – top – USA , Mexico , India , in india – AP (andhra) , Karnataka
5. BAJRA – IN india – rajasthan , maharastra , gujrat
6. RAGI – top – karanataka , tamilnadu , andhrapradesh
7. Barley – TOP – UP , Rajasthan



Choose and furnish the year against the following events (1923, 1972, 1985, 1970, 1986)

1923 Establishing Dryland Research Station at Manjri (Pune) by Tamhane

1972- Establishment of ICRISAT

1985 Birth of Central Research Institute for Dryland Agriculture at Hyderabad

1970 Research Centres established under AICRPDA in 23 locations

1986 Launching of NWDPRA programmes by Government of India in 15 states.

The average annual rainfall of India is 1192 mm where as in Andhra Pradesh it is 890 mm.

More than one third of total geographical area in India receive rainfall less than 750 mm

Most of the dry land soils are deficient in nitrogen and zinc.

Soil crust hinders the emergence of seedlings.

Prolonged meteorological drought results in hydrological drought.

The kind of drought where crops are unable to absorb water from soil even when water is available, due to the high osmotic pressure of soil solution is referred to as Physiological drought.

The plant population should be lesser in dryland conditions than under irrigated conditions.

The rectangular type of planting pattern should always be followed under dryland conditions.

The contingent management practices done in the standing crop to overcome the unfavourable soil moisture conditions due to prolonged dry spells are known as mid season conditions.

The collection of runoff water during peak periods of rainfall and storing in different structures is known as water harvesting.

A line joining the points of equal elevation is called contour.

In general a single crop is being taken in dry farming areas where the annual rainfall is below 500 mm.

In areas where the annual rainfall is in the range of 600-850 mm, intercropping is being recommended and practiced.

Double cropping either by sequential cropping or relay cropping is possible in places with high rainfall of > 900 mm.



Zinc and sulphates deficiency in wheat field reported in Punjab

Most suitable cropping system for wheat crop **Mixed cropping**

Objectionable weed of wheat **Convolvulus arvensis**

Associated weeds of wheat **Phalaris minor, Avena fatua and Chenopodium album**

Common herbicide used to control weeds in wheat **2, 4-D**

Initial distinguishing character for identification of *Phalaris minor* It is basal node is pink upto **50 days**

The moisture content at harvesting stage of wheat **25-30%**

3. Maize

The botanical name of maize is ***Zea mays***

Maize crop is also referred as **Queen of cereals**

The maize protein is known as **Zein**

Protein and oil per cent in Maize grain **8–10 per cent and 4–5 per cent**

Most widely grown maize spp. in India? ***Zea mays indurata* (Flint corn)**

Leading state of rabi maize? **Bihar**

Maize variety widely grown in USA? ***Zea mays indentata* (Dent corn)**

The sweetest maize species ***Zea mays sacchrata* (Sweet corn)**

Maize species produce starch similar to tapioca ***Zea mays ceretina* (Waxy corn)**

Seed rate of Hybrid maize **20 to 25 kg/ha**

Seed rate of Composite maize is **15 to 20 kg/ha**

First maize hybrid released in India? **1961**

Single cross technology of maize is given by **East and Shull (1910)**

Double cross technique of maize is given by **D.F. Jones (1920)**

Fodder crop maize varieties are **African tall, J1006**

Pop corn maize varieties are **Amber pop, V L Amber. Pop, Pearl pop corn**

Quality Protein Maize (QPM) varieties released by using **Opaqua-2 genes**

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