

There will be one question paper in the written examination, which will contain 100 questions and the total time duration will be two hours. The questions of the examination will be objective and multiple-choice type. Each question will be of one mark. There is a provision of negative marking for each wrong answer for the examination, which will be 25 percent i.e. $\frac{1}{4}$ of the marks prescribed for that question.

Examination Plan

The parts of examination, subjects, number of questions, total marks and time period will be as per the details given below-

Part	Subject	Number of Questions	Total Marks	Time Period
Part-1	(1) Farm Power Engineering and Non-Conventional Sources of Energy	5	5	Two Hours (120 Minutes)
	(2) I.C. Engine (Internal Combustion Engine)	5	5	
	(3) Tractor	5	5	
	(4) Non-Conventional Energy: Biogas Technology	5	5	
	(5) Wind Engineering Technology and Solar Energy Technology	5	5	
	(6) Post-Harvest Technology and Agro-Waste Industries: Introduction	5	5	
	(7) Agro-Based Industries	5	5	
	(8) Farm and Land Development Machinery: Farm Mechanization	5	5	
	(9) Irrigation and Drainage Engineering: Introduction	5	5	
	(10) Water Requirement of Plants	5	5	
	(11) Irrigation Methods and Minor Irrigation	5	5	






	(12) Soil and Water Conservation and Land Reclamation Engineering	5	5
	(13) Land Reclamation and Ravine Reclamation	5	5
Part-2	Knowledge of concepts of Computer and Information Technology and contemporary technological development and innovation in this field	15	15
Part-3	General information related to the state of Uttar Pradesh	20	20
Total		100	100

Note- There is a provision of negative marking for each wrong answer for the above examination, which will be 25 percent i.e. $\frac{1}{4}$ of marks prescribed for that question.

SYLLABUS

Part-1

(Subject related Knowledge)

(1) Farm Power Engineering and Non-Conventional Sources of Energy -

Introduction – Sources of power on farms: comparative study, uses, limitations, and brief descriptions of animal, fossil fuel (diesel and petrol), wind, solar, biogas, and electric power.

(2) I.C. Engines-

Principles of heat engines, operating principles, classification of I.C. engines, operating principles of two-stroke and four-stroke engines, diesel and petrol engines; stationary, reciprocating, and rotary parts (materials of construction and functions); concepts of terms related to I.C. engines; numerical problems related to various terms; engine performance

(3) Tractor-

Introduction: Classification and adaptability of tractors; factors affecting tractor selection; general overview of different makes, models, and HP ranges of tractors. Recurring operating costs of small petrol engines, diesel engines, and tractors.

(4) Non-conventional Energy: Biogas Technology –

Introduction to biogas, production of biogas, biodigestion of plant and animal waste, reactions occurring during biodigestion, gases produced during the process,

21/11/21

[Signature]

[Signature]

[Signature]

elimination of unwanted gases such as CO₂ and H₂S, factors affecting gas production, efficiency of biogas plants in winter, uses of biogas.

(5) Wind Engineering and Solar Energy Technology-

Types of windmills (vertical axis and horizontal axis), various uses of windmills, site selection for windmill construction, operation and maintenance of windmills, solar radiation and solar radiation potential in India, applications of solar energy, solar collectors.

(6) Post-Harvest Technology and Agro-Waste Industries: Introduction –

Importance of grain and seed processing; principles of agricultural processing; sequence of operations; flow diagrams; services offered by processors to farmers (for wheat, maize, paddy, and soybean).

(7) Agro-based Industries-

Sugarcane crushing; Khandsari and jaggery making processes and equipment; utilization of vegetable and animal waste; soybean and potato by-products; dehydration of vegetables.

(8) Farm and Land Development Machinery: Farm Mechanization-

Definition, status of farm mechanization in India, scope, limitations, and advantages; primary and secondary tillage equipment; sowing and planting equipment; harvesting and threshing equipment; land development equipment—construction, operation, and output of the following: dozer, scraper, drag hoe, and dragline.

(9) Irrigation and Drainage Engineering: Introduction-

Definition and history of irrigation; necessity and scope of irrigation; waterlogging and salinity (definitions, necessity of control, and control measures); interrelationship between irrigation and drainage; drainage efficiency; and different types of surface and subsurface drainage systems.

(10) Water Requirements of Plants-

Soil types; soil properties in relation to irrigation and drainage; classes and availability of soil water; evaporation, transpiration, and evapotranspiration; consumptive use; estimating crop water requirements; duty of water and delta; assessment of irrigation water requirements for different crops; estimation of irrigation depth and timing; various criteria for irrigation scheduling based on soil-plant-atmosphere factors.

(11) Irrigation Methods and Minor Irrigation-

Surface and subsurface methods; sprinkler and drip irrigation systems and conjunctive use; measurement of irrigation efficiencies (water conveyance, storage, application, distribution, and water use efficiency); and the importance, necessity, and advantages of minor irrigation. Land surveying, methods of leveling, determination of cuts and fills, importance and necessity of leveling, sources of minor irrigation, definition

21/10/21

[Signature]

[Signature]

[Signature]

of a tubewell, need, advantages and disadvantages, characteristics of a tubewell site, and factors affecting site selection.

(12) Soil and Water Conservation and Land Reclamation Engineering-

Mechanics, types, and causes of soil erosion; factors affecting erosion; damage caused by soil erosion; agronomic measures for soil and water conservation (contour farming, mulching, strip cropping, cover cropping, mixed cropping); role of grasses in soil conservation; mechanical methods of erosion control (field bunding, contour bunding, graded bunding, ridge and channel terraces); gully erosion control. Classification of gullies; control of gullies using temporary and permanent structures: earthen check dams, brush dams, loose-rock dams, straight-drop spillways.

(13) Land Reclamation and Ravine Reclamation-

Classification of User soils, salt-tolerant crops, reclamation of Usar soils, reclamation of wasteland, forest lands, and sandy soils; sand dune stabilization; classification of ravines and various measures for ravine reclamation.

Part-2

(Knowledge of Concepts of Computer and Information Technology and Contemporary Technological Development and Innovation in this field)

- History, Introduction and Application of Computer, Information Technology, Internet and World Wide Web (WWW).
- General Knowledge related to:
 - ✓ Hardware and Software.
 - ✓ Input and Output.
 - ✓ Internet Protocol/IP Address.
 - ✓ IT gadgets and their application.
 - ✓ Creation of e-mail ID and use/operation of e-mail.
 - ✓ Operation of Printer, Tablet and Mobile.
 - ✓ Important elements of Word Processing (MS-Word) and Excel Processing (MS-Excel).
 - ✓ Operating System, Social Networking, e-Governance.
- Digital Financial Tools and Applications.
- Future Skills and Cyber Security.
- Technological Development and Innovation in the field of Computer and Information Technology (Artificial Intelligence, Big Data Processing, Deep

Learning, Machine Learning, Internet of Things) and India's achievements in this field etc.

Part-3

(General Information related to The State of Uttar Pradesh)

In this part of the question paper, questions based on History, Culture, Art, Architecture, Festivals, Folk Dance, Literature, Regional Languages, Heritage, Social Customs and Tourism, Geographical Landscape and Environment, Natural Resources, Climate, Soil, Forest, Wildlife, Mines and Minerals, Economy, Agriculture, Industry, Business and Employment, Polity, Administration of Uttar Pradesh and Current Events and Achievements of Uttar Pradesh State in various fields etc. will be asked from the candidates.

10-लिखित परीक्षा के सम्बन्ध में विशेष नोट -

विज्ञापन संख्या-19-परीक्षा/2026, अवर अभियंता (कृषि) मुख्य परीक्षा (प्रा0अ0प0-2025)/19 की लिखित परीक्षा हेतु अभ्यर्थियों की शार्टलिस्टिंग उनके प्रारम्भिक अर्हता परीक्षा-2025 के नार्मलाइज्ड स्कोर के आधार पर की जाएगी। प्रश्नगत विज्ञापन के अंतर्गत विज्ञापित पदों के सापेक्ष श्रेणीवार 15 गुना अभ्यर्थियों को [अंतिम कटऑफ अंक तक नार्मलाइज्ड स्कोर (दशमलव के 02 स्थान तक) धारित करने वाले समस्त अभ्यर्थियों को सम्मिलित करते हुए] लिखित परीक्षा हेतु शार्टलिस्ट किया जायेगा।

यदि परीक्षा एक से अधिक पालियों/ दिवस में आयोजित की जाती है तो अभ्यर्थियों के तुलनात्मक मूल्यांकन हेतु स्कोर के नार्मलाइजेशन की प्रक्रिया दिनांक 22 मई, 2019 को प्रकाशित आवश्यक सूचना संख्या-42/05/विज्ञा0 अनु0 (ग्यारह)/2019 में उल्लिखित प्रावधानों के अनुसार होगी।

11-अभ्यर्थियों के लिए महत्वपूर्ण अनुदेश-

- 11.01- उत्तर प्रदेश के आरक्षित श्रेणी के सभी अभ्यर्थी आवेदन में अपनी श्रेणी अवश्य अंकित करें।
- 11.02- एक से अधिक आरक्षित श्रेणी का दावा करने वाले अभ्यर्थियों को केवल एक छूट, जो अधिक लाभकारी होगी, अनुमन्य होगी।
- 11.03- अभ्यर्थी, जो उ०प्र० राज्य के मूल निवासी नहीं हैं, उन्हें आरक्षण का लाभ अनुमन्य नहीं है। ऐसे अभ्यर्थी अनारक्षित श्रेणी के माने जाएंगे।
- 11.04- सैन्य वियोजित/भूतपूर्व सैनिकों (Ex-Servicemen) (जो आवेदन की अंतिम तिथि अर्थात् दिनांक 07-10-2026 तक सेवा निवृत्त हो चुके हों) को आरक्षण उत्तर प्रदेश लोक सेवा (शारीरिक रूप से विकलांग, स्वतंत्रता संग्राम सेनानियों के आश्रित और भूतपूर्व सैनिकों के लिए आरक्षण) अधिनियम, 1993 (यथा संशोधित) व अद्यतन सुसंगत नियमावली/शासनादेशों के प्राविधानानुसार अनुमन्य होगा।
- 11.05- उत्तर प्रदेश के उत्कृष्ट खिलाड़ियों को उत्तर प्रदेश सरकारी विभाग (उत्कृष्ट खिलाड़ियों की समूह-ग के पदों पर सीधी भर्ती) नियमावली-2022 व अद्यतन सुसंगत शासनादेशों अंतर्गत आरक्षण का लाभ प्राप्त करने हेतु सक्षम अधिकारी द्वारा निर्धारित प्रारूप पर निर्गत प्रमाण पत्र प्रस्तुत करना अनिवार्य होगा।
- 11.06- महिला अभ्यर्थियों के मामले में पिता पक्ष से निर्गत जाति प्रमाण पत्र ही मान्य होगा।
- 11.07- ऐसे अभ्यर्थी जो उत्तर प्रदेश के स्वतंत्रता संग्राम सेनानी के आश्रित होने का दावा करते हैं, उन्हें यह सुनिश्चित कर लेना चाहिए कि उनके पास उत्तर प्रदेश लोक सेवा (शारीरिक रूप से दिव्यांग, स्वतंत्रता

21/10/2024